FM/AM STEREO RECEIVER

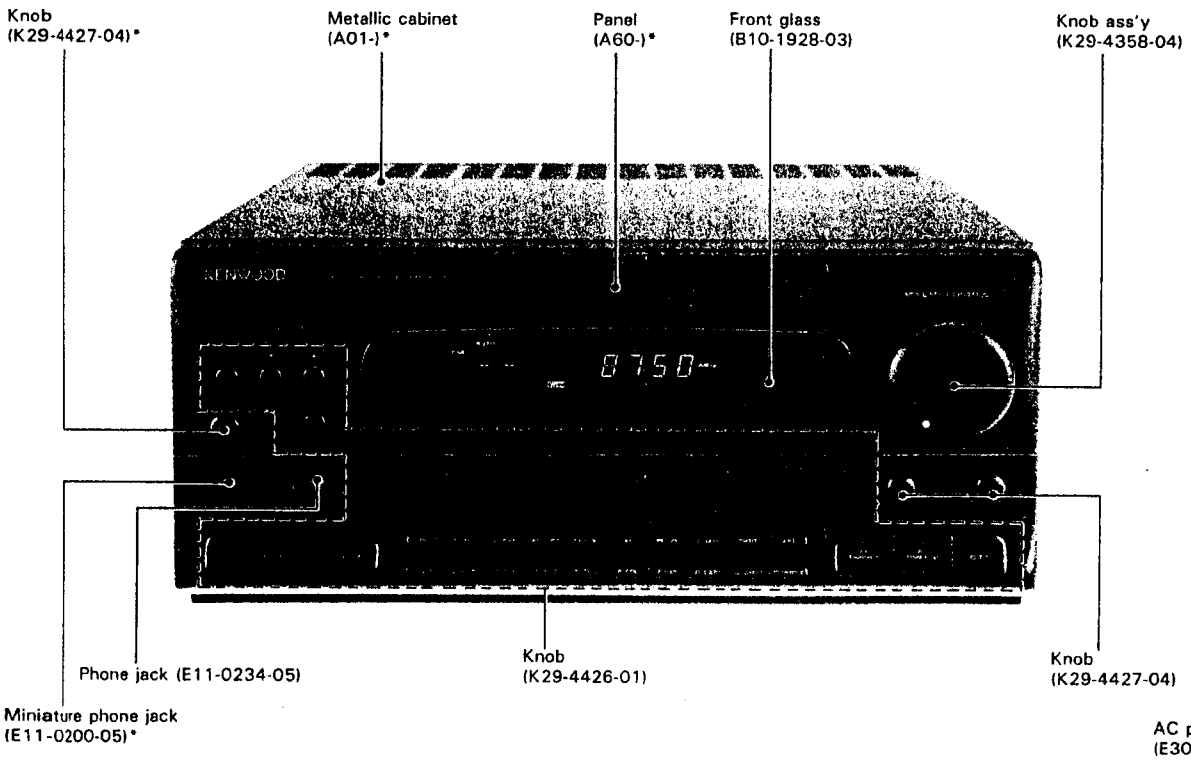
A-A5/A5L

SERVICE MANUAL

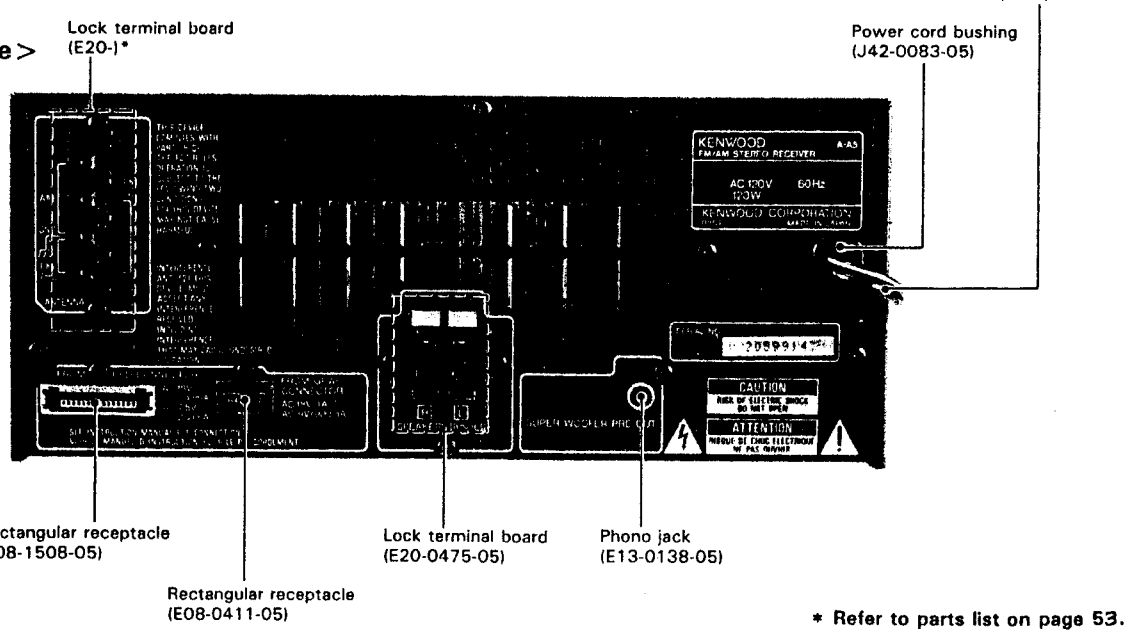
(COMPACT HIFI SYSTEM
UD COMPONENT SYSTEM UD-500/500M)

KENWOOD

B51-4600-00(MC) 4114



<K,P,T,E type>



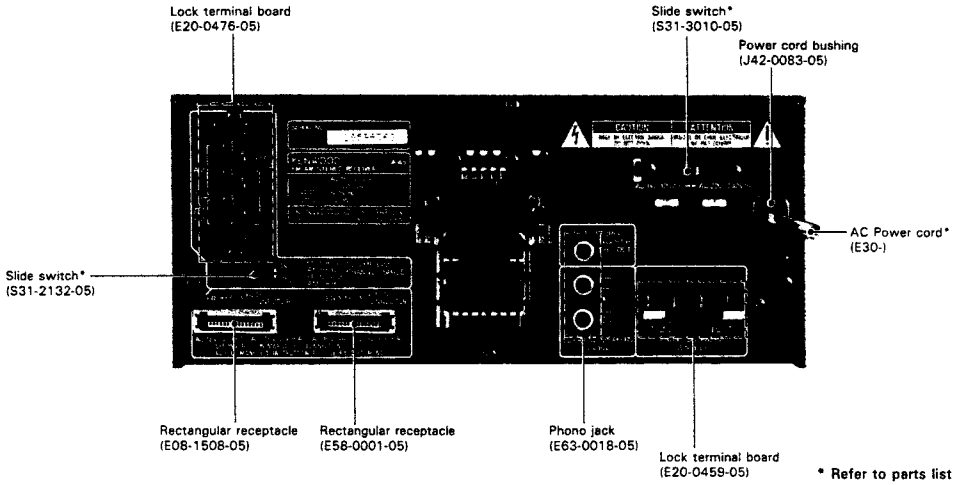
* Refer to parts list on page 53.
Photo is A-A5.

[A-A5 : K,P,Y,M,X type
A-A5L: T,E type]

Refer to the SERVICING NOTES on page 2 before repair.

CONTENTS/SERVICING NOTES

<Y,M,X type>



* Refer to parts list on page 53.

Contents

Servicing notes

① This unit does not contain a selector IC. However, as INPUT SELECTOR IC is in corporated into the graphic equalizer (GE-A5), signal system goes through the graphic equalizer. Since each speaker relay of this unit is operated according to the data that is serially transmitted from the graphic equalizer (GE-A5), the receiver cannot output sound alone. To output a tuner signal to each speaker terminal, follow the following procedures.

Procedure 1)

Direct the tuner output to the main amplifier input. Connect the test pin on the right (lower right of the tuner board) of the main amplifier board (X09, A/6) (Fig. 1 or 2)

Front amplifier

K,P,T,E type (Fig. 1): Pins 8 and 9 (Left channel); Pins 6 and 4 (Right channel)

Y,M,X type (Fig. 2): Pins 3 and 1 (Left channel); Pins 4 and 17 (Right channel)

After turning power ON in this setting, front L & R channels are output.

Procedure 2)

Enter the test mode. (Hold down the CHARACTER key, and insert the AC plug into the outlet.)

All fluorescent displays light.

1) Press the LD/AUX key. (The front speaker outputs sound.)
2) Press the CHARACTER key. (S.W. OUT outputs sound.)
   * Normally, S.W.OUT is operated by Remote control unit.

② Be sure to use the designated part (parts no. F20-1284-05) for the isolation of the power (final) transistor.

③ Y,M,X type only.
The cooling fan of the Main board (X09) is usually rotating at a low speed but, when the heat sink temperature rises above 80°C, temperature assurance switch S1 opens and the fan starts high-speed rotation. When the temperature further rises above 105°C, temperature assurance switch S2 also opens and the protection circuitry is activated to stop the output. (To release the protection, turn power OFF. To check the high-speed rotation operation of the fan, short-circuit test points W67 and W92.)

A-A5/A5L

SERVICING NOTES/ACCESSORIES

Fig. 1 (K, P, T, E type)

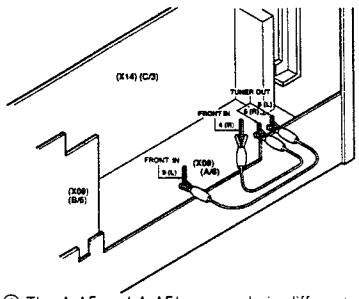
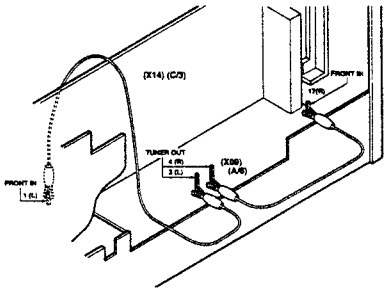


Fig. 2 (Y, M, X type)

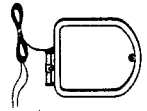


④ The A-A5 and A-A5L are made in different countries. However, their circuits are identical.

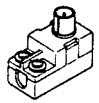
Model name	ABB.	Audio unit			Display unit		
		Japan made	Singapore made	France made	Japan made	Singapore made	France made
A-A5	K	X09-3680-11	X09-3720-10	—	X14-3620-12	X14-3640-11	—
	P	X09-3680-11	X09-3720-10	—	X14-3620-12	X14-3640-11	—
	Y	X09-3670-22	—	—	X14-3620-22	—	—
	M	X09-3670-22	X09-3710-22	—	X14-3620-22	X14-3640-22	—
	X	X09-3670-72	X09-3710-72	—	X14-3620-72	X14-3640-72	—
A-A5L	T	X09-3680-51	X09-3720-51	X09-3720-52	X14-3622-72	X14-3642-72	X14-3642-73
	E	X09-3682-71	X09-3722-71	X09-3722-72	X14-3622-72	X14-3642-72	X14-3642-73

Accessories

- AM loop antenna 1
  (T90-0173-05): Japan made
  (T90-0174-05): Singapore made
  (T90-0153-05): France made)



- Antenna adaptor
  (75 Ω/300 Ω) 1
  (For U.K. and Europe)
  (T90-0185-05)

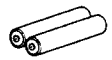


- Remote control unit 1
  (X94-1000-61)
  Battery cover (A09-0115-13)

Remote control unit is packed with the graphic equalizer unit.

- FM indoor antenna 1
  (T90-0176-05): Japan made
  France made
  (T90-0175-05): Singapore made

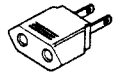
- Batteries (R03/AAA) 2



- Speaker cords (E30-1297-05)
  ..... Red/Black × 2

- Loop antenna stand 1
  (J19-2815-04)

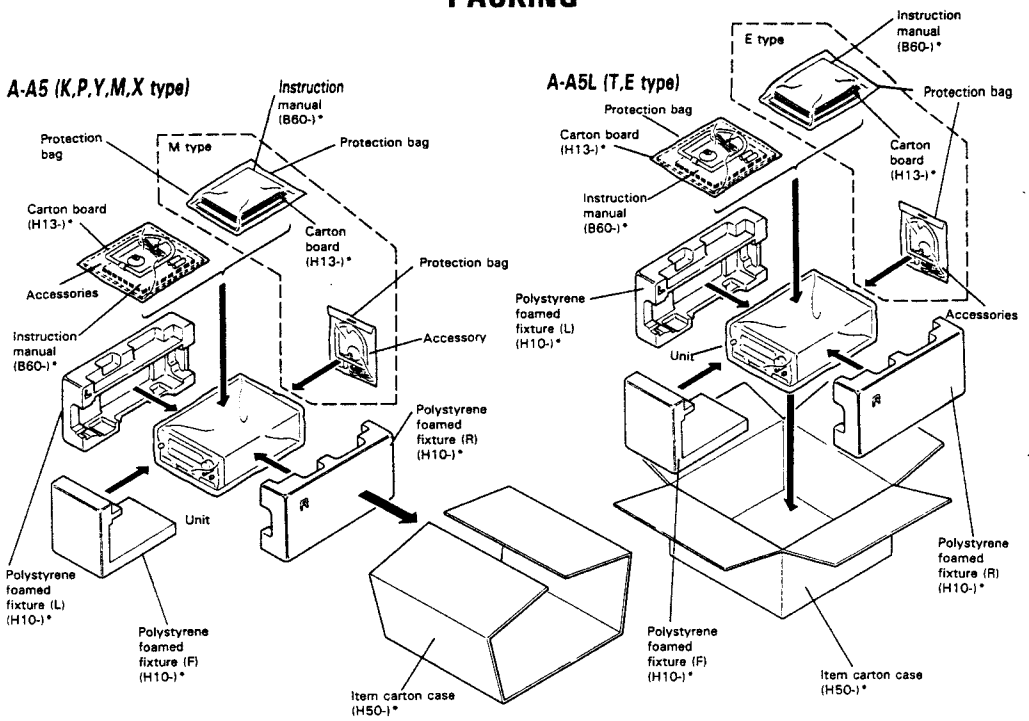
- AC plug adaptor 1
  (Except for some arears)
  (E03-0115-05)



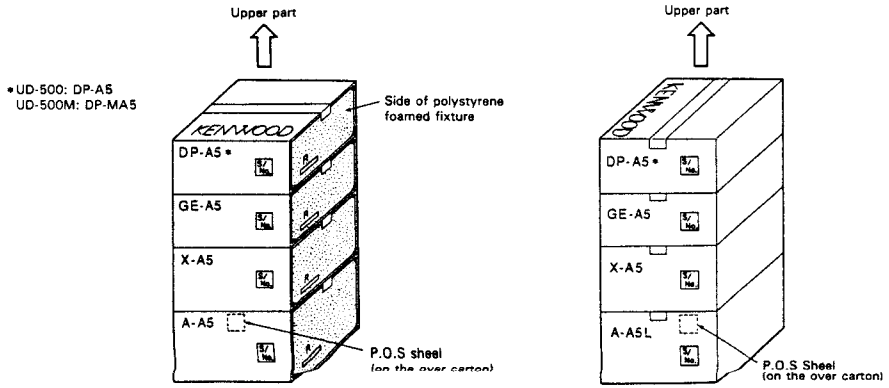
For the unit with a European AC plug in areas other than Europe.

Speaker cords are packed with the speakers. Remote control unit is packed with the graphic equalizer unit. All other accessories are packed with the receiver unit.

PACKING

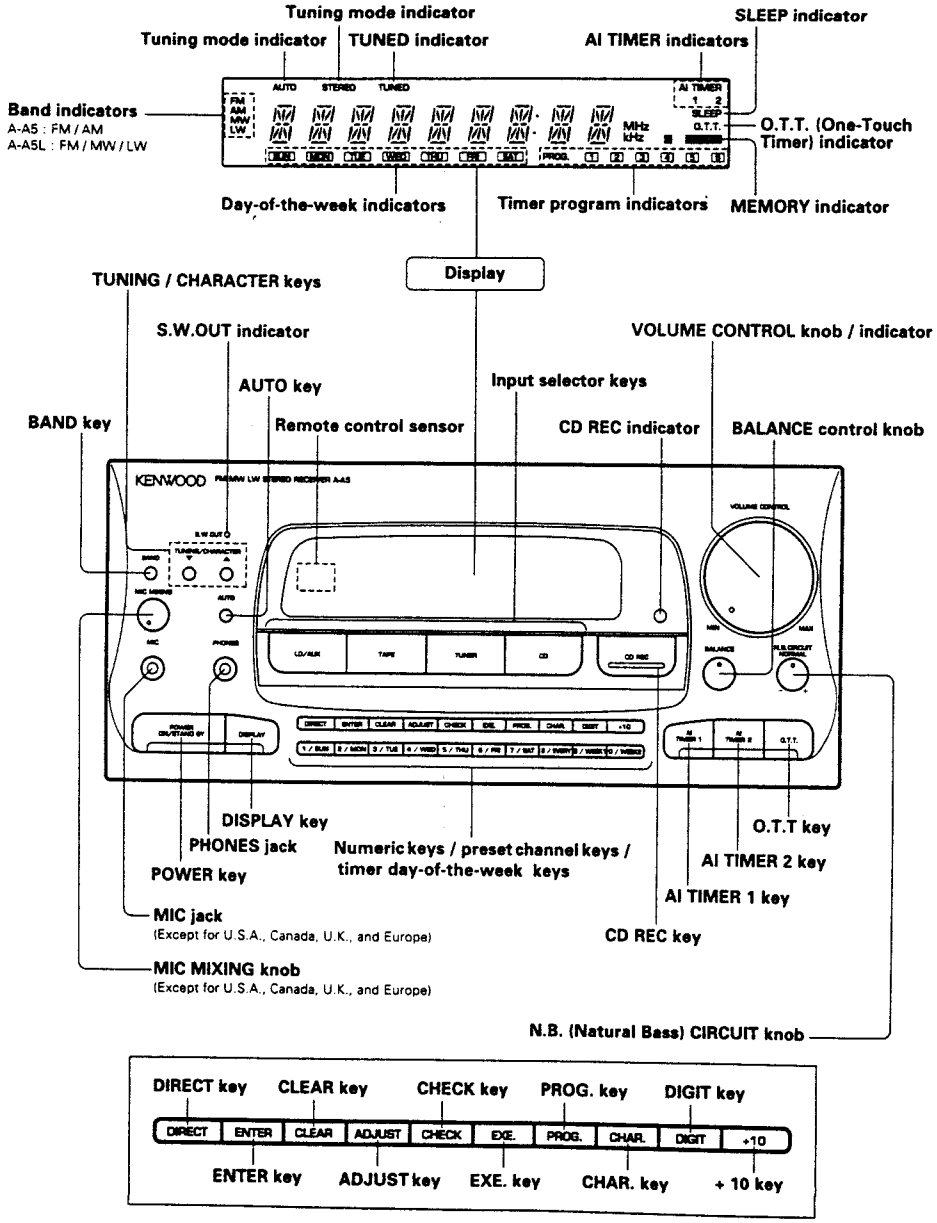


* Refer to parts list on page 53.



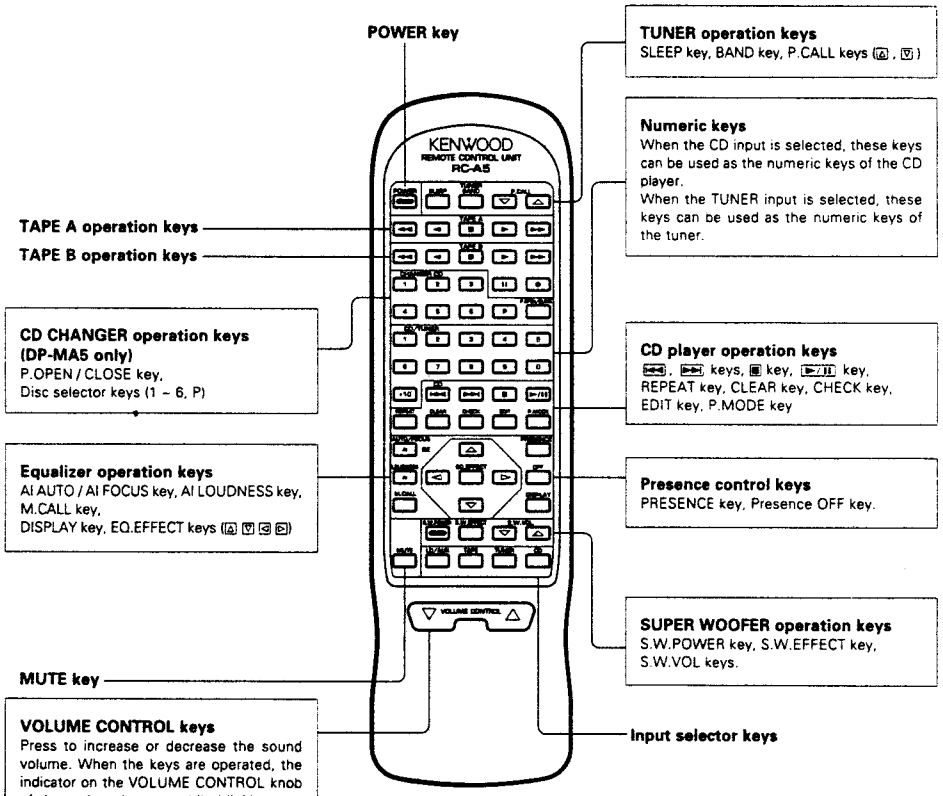
CONTROLS & INDICATORS

Receiver unit



CONTROLS & INDICATORS

Remote control unit



Model: RC-A5
Infrared control system

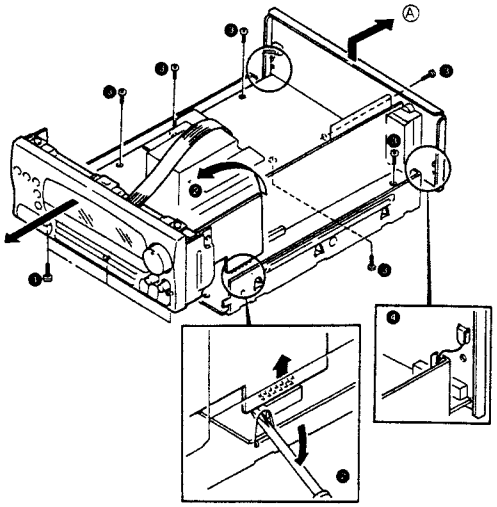
A-A5/A5L

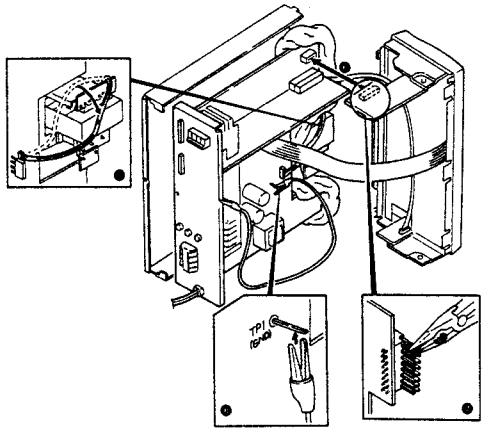
DISASSEMBLY FOR REPAIR

<K,P,T,E type>

1) Removing the audio main unit (X09: A/6)

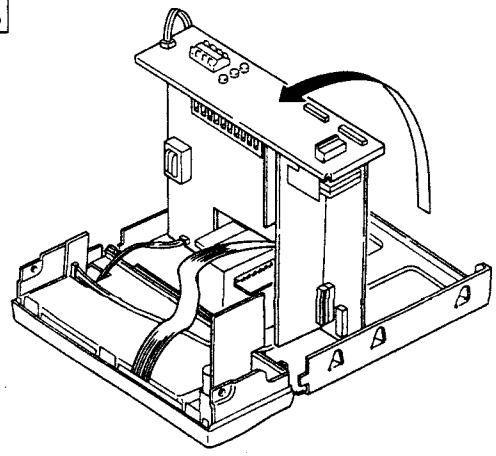
1. Remove the three screws (❶), then remove the front panel while disconnecting the connector in the direction of arrow (❷).
2. Remove the six screws (❸), then remove the audio main unit in the direction of arrow (Ⓐ).
   Note: When installing the audio main unit, insert the clows as shown in the figure (❹).





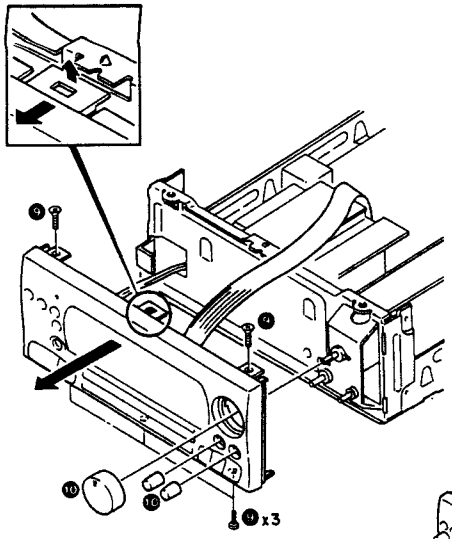
2) How to check the audio main unit (X09: A/6)

1. Stand the set with the right side upward, then move the audio main unit to parallel while moving the secondary parallel lead as shown in the figure (❺).
2. Insert the connector of volume unit (X09: B/6) to the connector of audio main unit (❻).
   Note: When the pins of connector is bent, correct them as shown in the figure (❼).
3. Lay a cloth between the audio main unit and transformer, and connect the board ground TPI to the rear panel (❽).



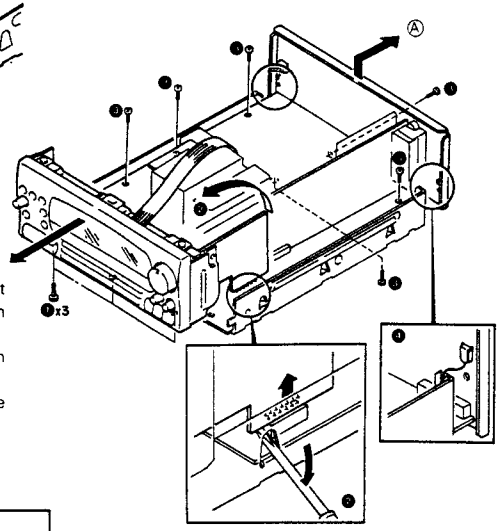
4. In case check the main unit only, be able to check without connect the front panel side.
   Stand the audio main unit with the rear panel side upward as shown in the figure.

DISASSEMBLY FOR REPAIR



3) Removing the front panel

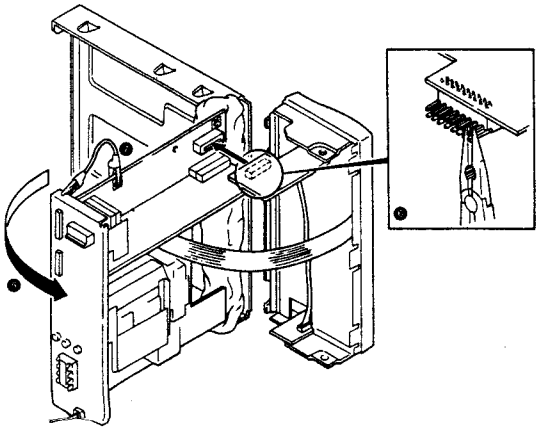
1. Remove the five screws (C).
2. Remove the three knobs (B), then remove the front panel in the direction of arrow.



<Y,M,X type>

1) Removing the audio main unit (X09: A/6)

1. Remove the three screws (B), then remove the front panel while disconnecting the connector in the direction of arrow (2).
2. Remove the six screws (3), then remove the audio main unit in the direction of arrow (Ⓐ).
   Note: When installing the audio main unit, insert the clows as shown in the figure (5).

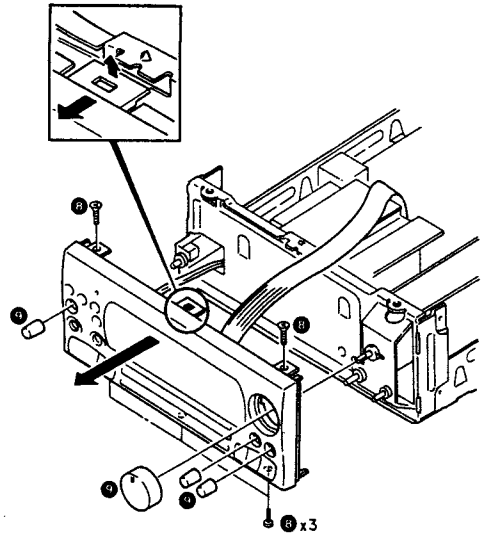


2) How to check the audio main unit (X09: A/6)

1. Stand the set with the right side upward, the move the audio main unit in the direction of arrow (6).
2. Insert the connector of volume unit (X09: B/6) to the connector of audio main unit.
   Note: When the pins of connector is bent, correct them as shown in the figure (4).
3. Lay a cloth between the audio main unit and transformer, and connect the board ground as shown in the figure (7).

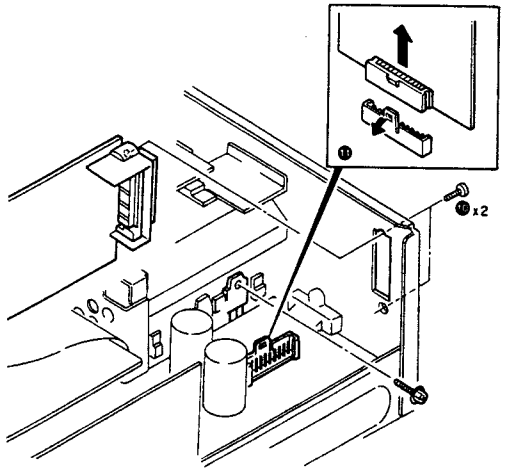
A-A5/A5L

DISASSEMBLY FOR REPAIR



3) Removing the front panel

1. Remove the five screws (C).
2. Remove the four knobs (B), then remove the front panel in the direction of arrow.

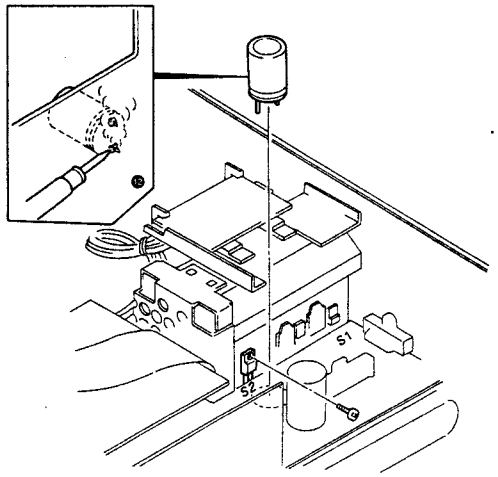


4) Removing the power transistor

1. Removing the two screws (B), then remove the tuner unit (X14: C/3).
2. Remove the X09: E/6 unit as shown in the figure (4).
3. Remove the screws, then remove the power transistor.

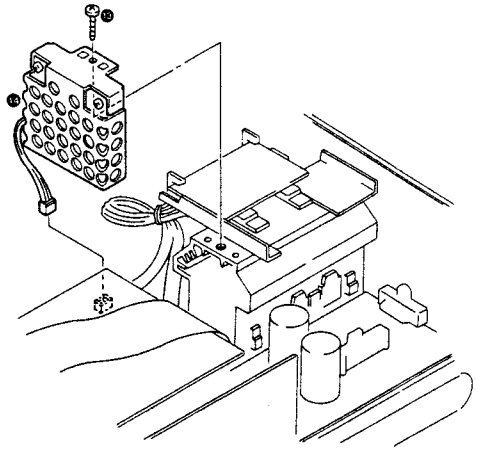
A-A5/A5L

DISASSEMBLY FOR REPAIR



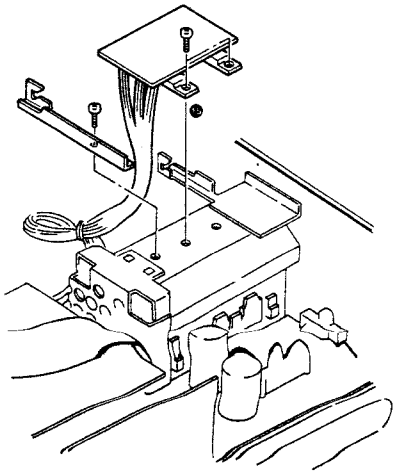
5) Removing the temperature compensating switch (S2)

1. Remove the tuner unit (X14: C/3) and X09: E/6 unit, then remove the capacitor (C90) (●).
2. Remove the one screw, then remove the temperature compensating switch.



6) Removing the fan

1. Remove the one screw (●).
2. Remove the fan (●).

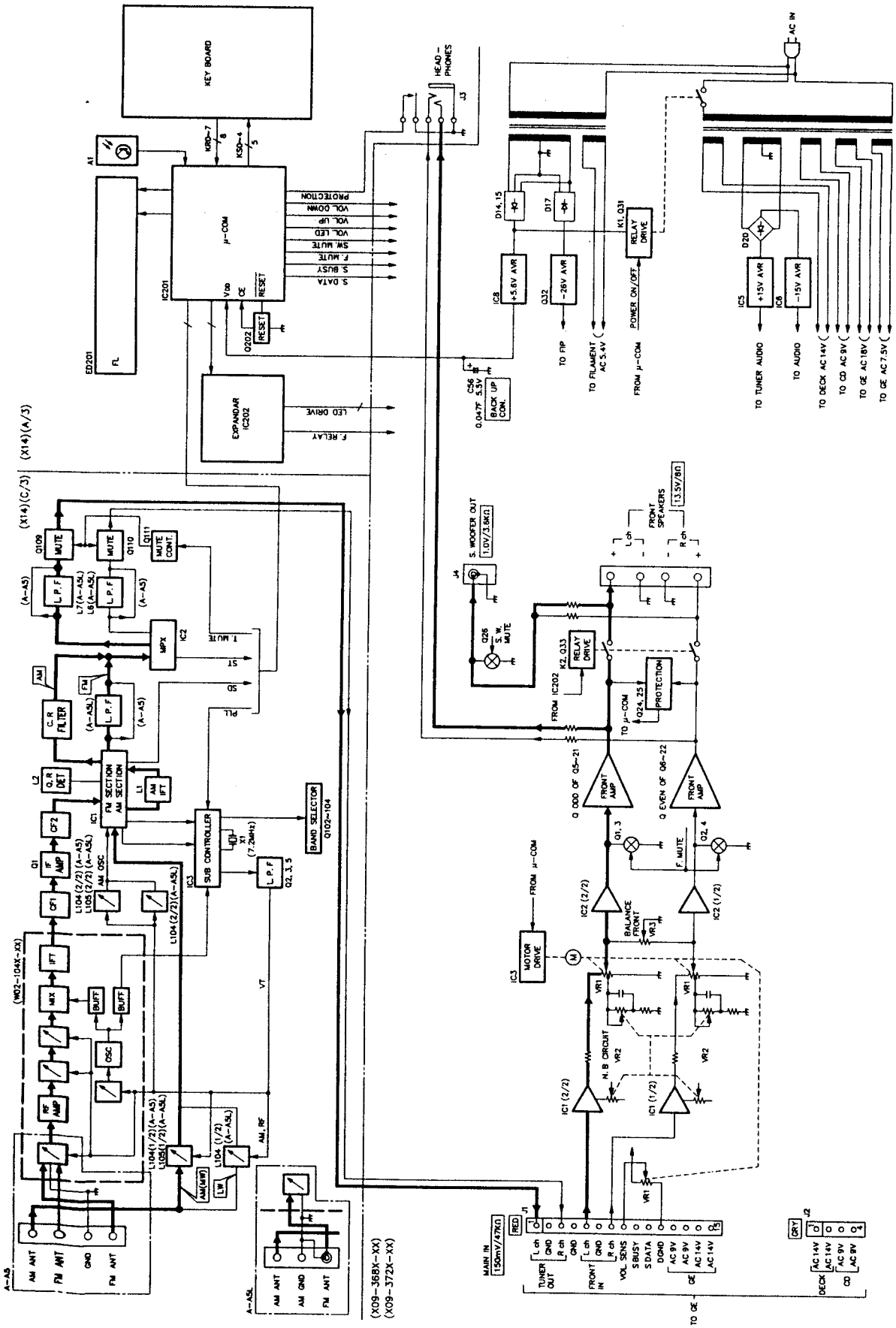


7) Removing the X09: C/6 unit

1. Remove the three screws, then remove the X09: C/6 unit. (●).

BLOCK DIAGRAM

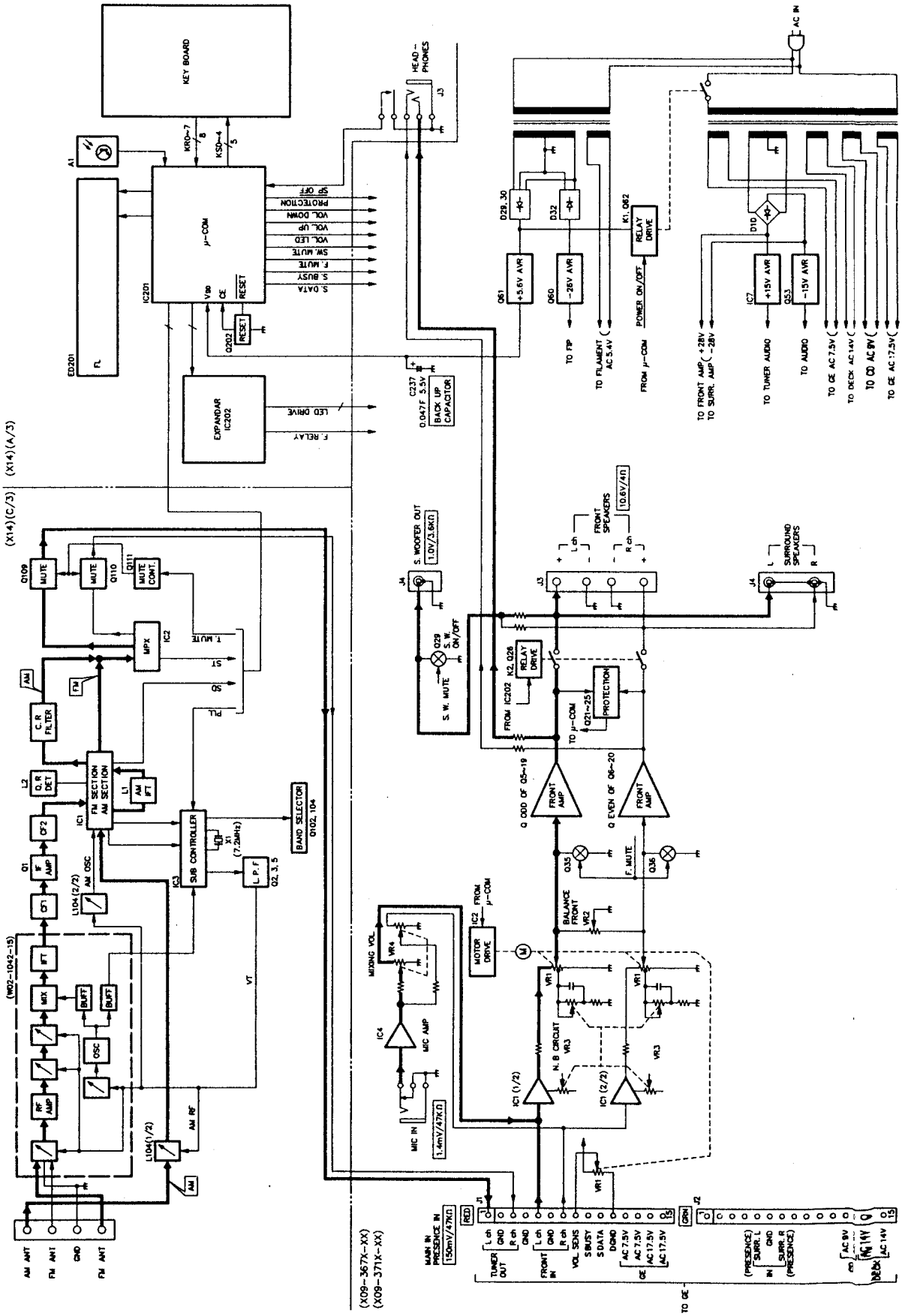
<K,P,T,E type>



A-A5/A5L

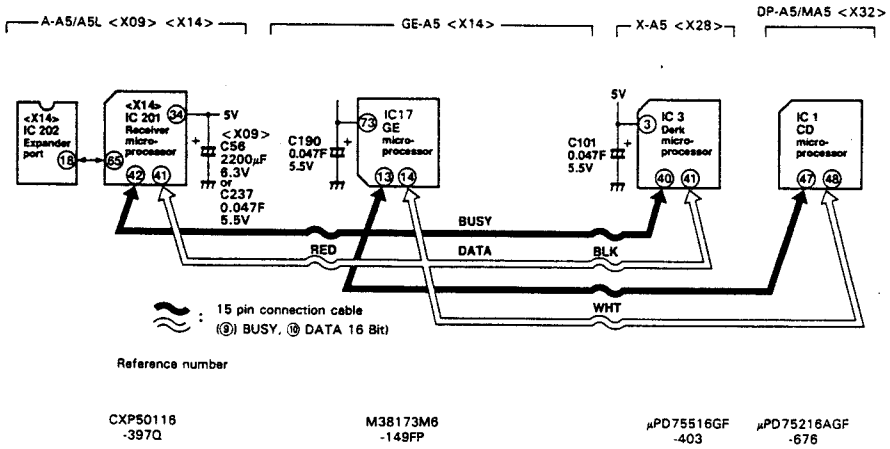
BLOCK DIAGRAM

<Y,M,X type>



CIRCUIT DESCRIPTION

1. Microprocessor and back-up condenser of this unit (16-bit serial transmission is supported like the UD-100/90/70, unlike the UD-7/9 series (8 bits).)



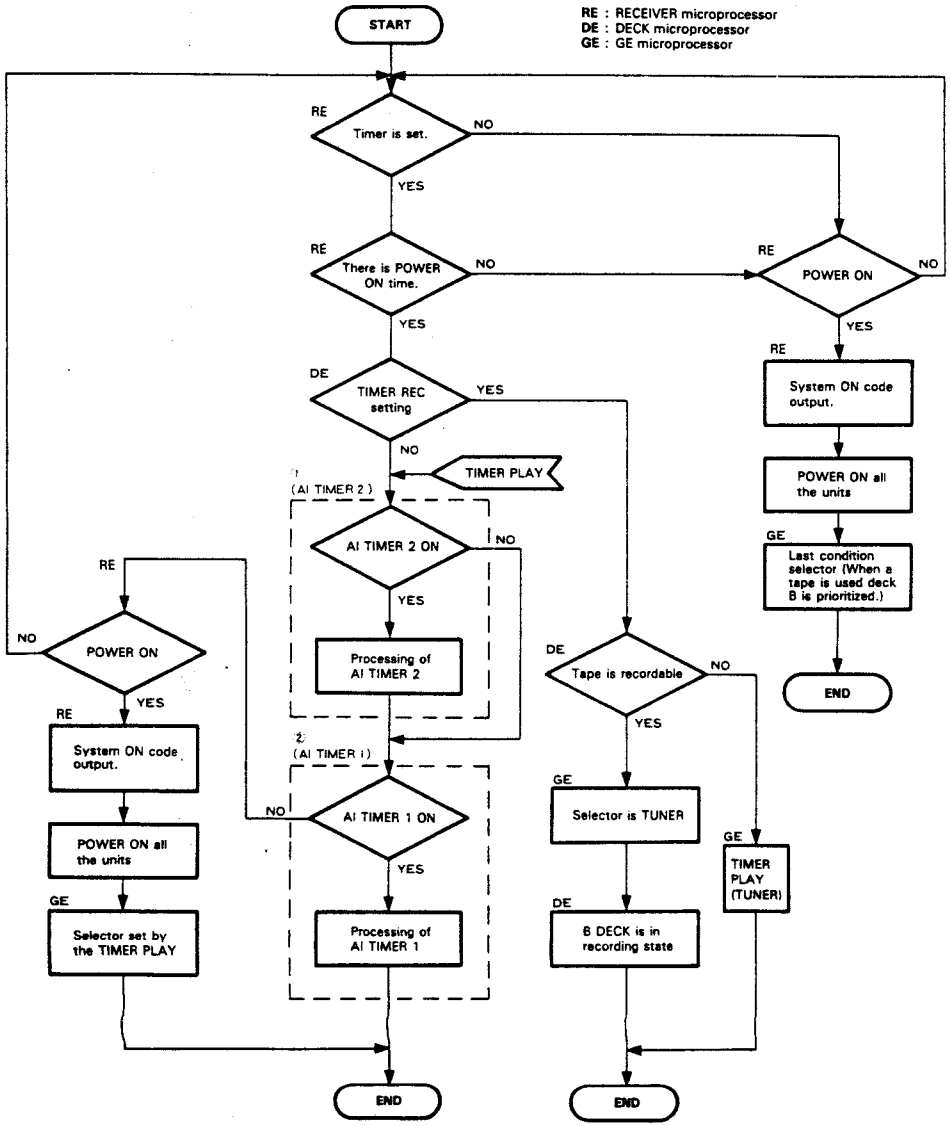
2. Microprocessor initialization (reset) and test mode

		A-A5/A5L	GE-A5	X-A5	DP-A5/MA5
		RECEIVER microprocessor (X14) IC201 CXP50116-397Q	GE microprocessor (X14) IC17 M38173M6-149FP	DECK microprocessor (X28) IC3 μPD75516GF-403	CD microprocessor (X32) IC1 μPD75216AGF-676
Backup capacitor		(X09) C56 2200 μF 6.3 V (K,P,T,E type) C237 0.047 F 5.5 V (Y,M,X type)	(X14) C190 0.047 F 5.5 V	(X28) C101 0.047 F 5.5 V	None
Initialization (reset)		Hold down the ENTER key, and insert the AC plug into the outlet.	Hold down the MEMORY key, and turn AC on.	Turn AC off in the CRLS test mode (see below).	Turn AC off again.
Test mode	Operation	Hold down the CHARACTER key, and insert the AC plug into the outlet.	Hold down the FLAT key, and insert the AC plug into the outlet.	Short test pin ⑧ ⊣▷⊢ ⑦, and insert the AC plug into the outlet.	Short-circuiting the test pins CN2 (1 pin and 2 pin)
	Release	Remove the AC plug from the outlet.	Release—AC off.	Press the PAUSE key.	Release-AC off
	Contents	① All fluorescent displays light. For details, see the service manual for each model.		No fluorescent display.	

CIRCUIT DESCRIPTION

3. Operation of UD-500/500M

The flow chart from power on through sound generation

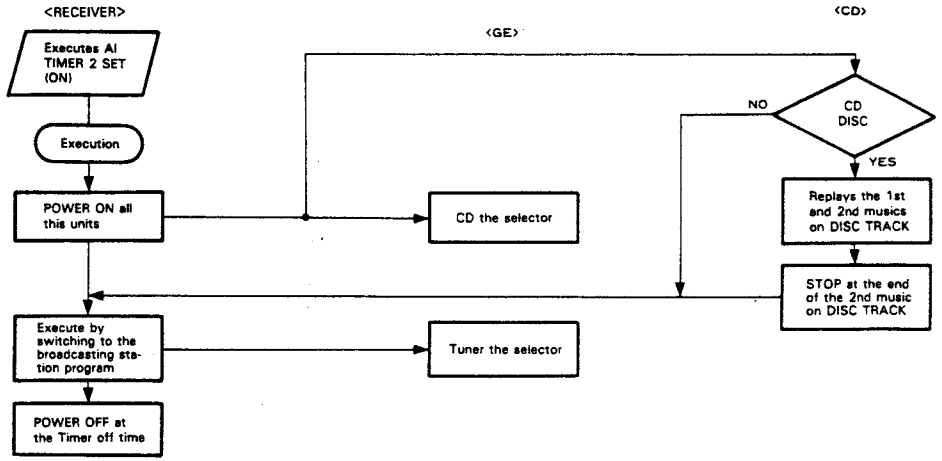


A-A5/A5L

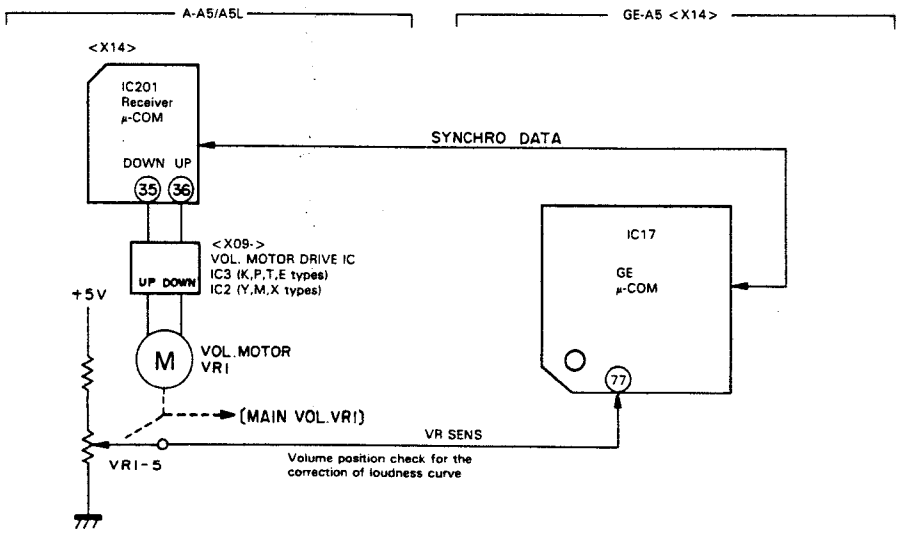
CIRCUIT DESCRIPTION

4. AI TIMER

4-1. Flow chart of AI TIMER 2

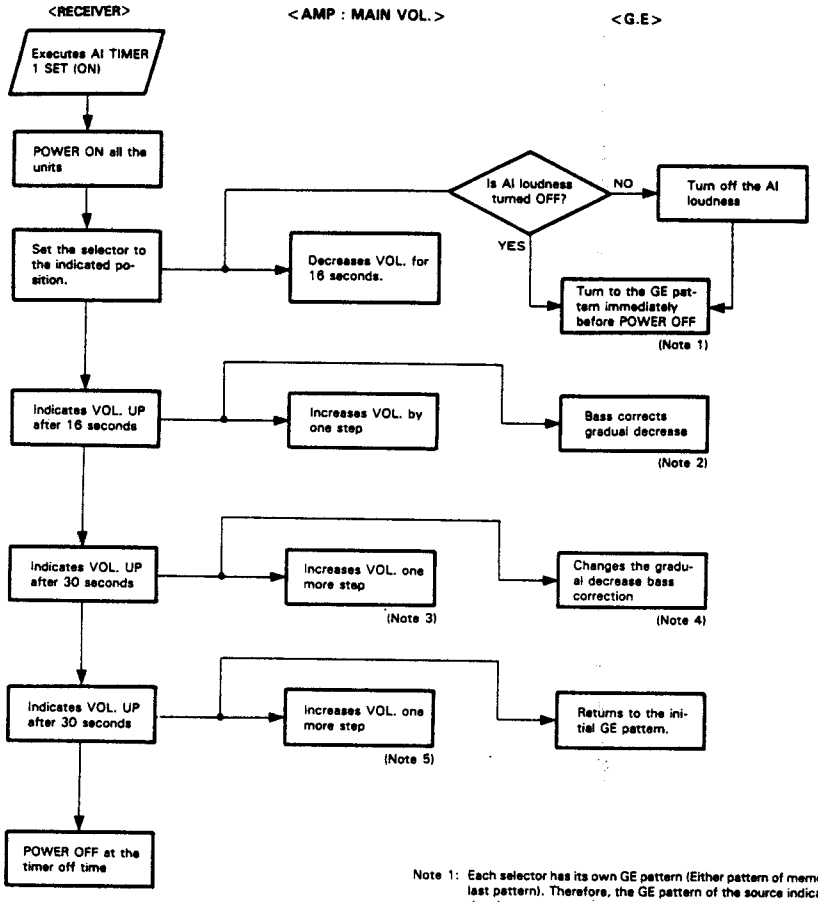


4-2. Operation of AI TIMER 1



CIRCUIT DESCRIPTION

4-3. Flow chart of AI TIMER 1



Note 1: Each selector has its own GE pattern (Either pattern of memory and last pattern). Therefore, the GE pattern of the source indicated by the timer appears.
Note 2: Shifts to the pattern which has the loudness effect (There are two patterns of the gradual decrease bass correction of AI TIMER 1).
Note 3: The three steps of increase volume can be selected.
Note 4: Decrease correction volume is lowered in accordance with VR UP.
Note 5: Same as Note 3. However, the VR position is limited at the position of 12.

A-A5/A5L

CIRCUIT DESCRIPTION

4-4. Function description

a) AI TIMER 1

- With the program timer mode set to PLAY, when the timer is turned ON, the setting contents for the AI TIMER 1 is activated if the AI TIMER 1 is set to ON (the FL indicator is lit).
- When the AI TIMER 1 is turned ON, first playback starts with the minimum volume level, then the volume level is increased in three steps.
- The third-step volume level (the maximum volume level) can be selected among the three types of the volume levels (VOL. 1-3). Each time the AI TIMER 1 key is pressed, the maximum volume level is changed in order from VOL. 1 to VOL. 3 and TIMER OFF setting cyclically.

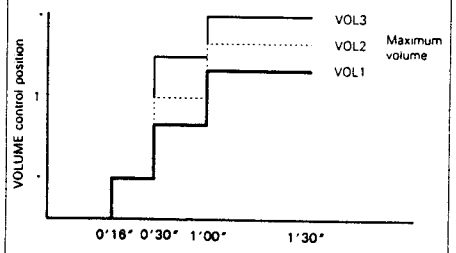
① When the key is pressed with the AI TIMER 1 is OFF (FL indicator is not lit):

OFF → VOL. 1 → VOL. 2 → VOL. 3

② When the key is pressed in the volume setting mode (FL indicator is lit):
Example: When VOL. 2 is selected

VOL. 2 → VOL. 3 → OFF → VOL. 1

Reference for volume selection



- The VOLUME control rotates as the volume changes.
- The graphic equalizer curve also varies accordingly.

b) AI TIMER 2

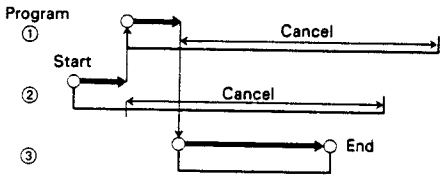
- With the program timer mode set to PLAY, when the timer is turned ON, the setting contents for the AI TIMER 2 is activated if the AI TIMER 2 is set to ON (FL indicator is lit).
- When the AI TIMER 2 is turned ON, if the disc is loaded in the CD player, the two tracks on the disc is played regardless whether the other source is set for play.
  Then, the playback source is changed to tuner automatically.
- Each time the AI TIMER 2 key is pressed, the timer setting is changed alternately.

5. Timer program operation

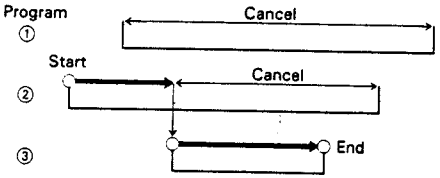
<When the program settings are registered within the same period>

- When the two or more program settings are to be started at the same time:
  The program having the least number is activated and others will be cancelled.
- When the setting time for two or more programs differ:
  First, the program with the earliest setting time is activated. Then, if the same mode (REC mode or PLAY mode) has been designated for the other program, the operation is changed to the program in which the same mode as the first one is designated and the end time for the above program will be cancelled. If another mode is set for of other programs, the contents will be cancelled.

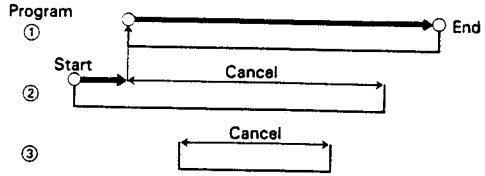
Example 1: When the operation modes for all three programs are set to PLAY:



Example 2: When the operation modes for programs ②, ③ are set to PLAY and that for the program ① is set to REC:



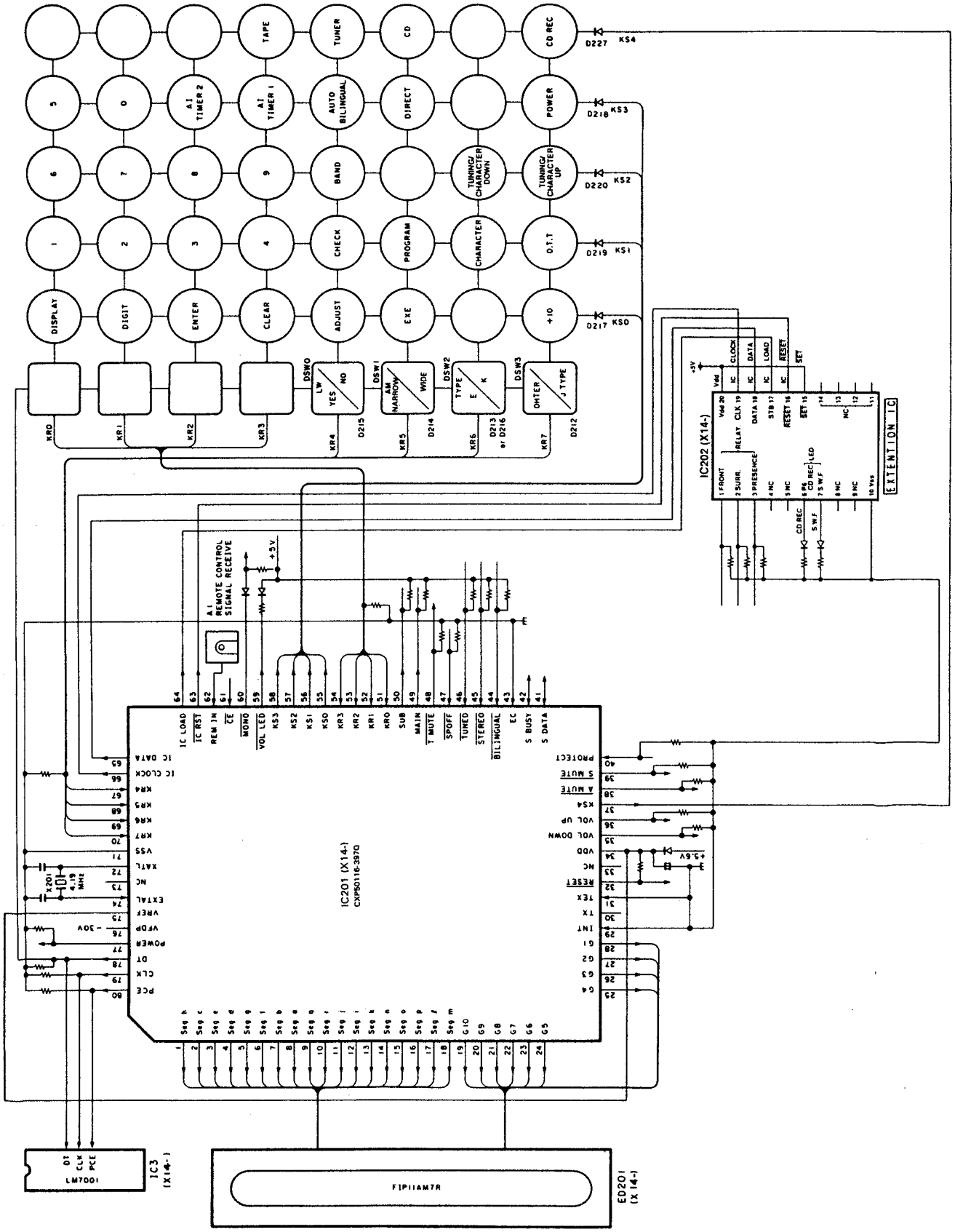
Example 3: When the operation mode for programs ①, ② are set to REC and that for program ③ is set to PLAY:



The program end is determined by the OFF time of the program which is activated at the last.

CIRCUIT DESCRIPTION

6. Block diagram of surrounding microprocessor



CIRCUIT DESCRIPTION

7. Function initial setting

(1) Tuner section

POWER ..... OFF
BAND ..... FM
Last frequency ..... Lower most limit of each band
Last preset ..... "- -" display
Preset memory ..... Test frequency of each memory
AUTO/MONO ..... AUTO
BILINGUAL ..... BOTH MODE
Display mode ..... POWER ON ... Frequency display
POWER OFF ... Clock display

(2) Clock, calendar, and timer section

Calendar ..... January 1, 1991
Clock ..... 0:00 Power failure mode
Programmable timer ..... Day of week : TUE
ON : 0:00
OFF : 0:00
MODE : PLAY
SOURCE : TUNER
SET ch : 01 ch
Execution mode : OFF
Sleep timer ..... OFF
One touch timer ..... OFF

(3) Amplifier section

Selector ..... Audio system : TUNER
Video system : LD
CD REC ..... OFF
SUPER WOOFER ..... OFF

Setting of initial conditions (reset)

(1) Method

While pressing ENTER key, turn the AC ON.

(2) Contents

Clears all the memory and returns to the initial conditions. However, the test frequency is newly memorized in the preset memory at this time. (The same as when the back-up data is NG.

8. Test mode

(1) Setting method

While pressing CHARACTER key, turn the AC on.

(2) Clearing method

AC off.

(3) Contents

- All fluorescent lamps and LEDs light.
- S 4-channel mode (the front, center, and rear speakers output sound).
- Receive the minimum FM value.

The test is performed with the following keys.

1) Preset channel calling
Normally, the +10 key changes the high-order digits 1-, 2-, and 0- alternately, but it changes the high-order digits 1- and 0- alternately in the test mode. The 0 key does not call any channel, but in the test mode, if the high-order digit is 0, 10 ch is called, and if it is 1, 20 ch is called. Table 1 lists the channels to be called.

Table 1

High order \ Low order	TEN KEY									
	1	2	3	4	5	6	7	8	9	0
0	1	2	3	4	5	6	7	8	9	10
1	11	12	13	14	15	16	17	18	19	20

2) Motor volume test
If the DIGIT key is pressed, the volume keeps increasing for 16 seconds, and then keeps decreasing for 16 seconds. To stop the test in the middle, switch the power off.

3) O.T.T key test (one-touch-timer)
Normally, the O.T.T key is not accepted if the clock is not functioning. Only in the test mode, it is indicated that the key is accepted, but it does not cause any operation. When the key is pressed the first time, ON 0:30 O.T.T appears on the fluorescent display, and after five seconds, only O.T.T is displayed. When the key is pressed the second time, O.T.T disappears, and the original state before the key is pressed returns.

9. Conditions by destination

	Destination type	DSW3	DSW2	DSW1	DSW0	Band	Receiving frequency range	Inter-channel space	Intermediate frequency	PLL reference frequency
A-A5	Y,M	1	1 or 0	1	0	FM	87.5 ~ 108.0 MHz	50 kHz /100 kHz	+10.7 MHz	50 kHz (25 kHz)
						AM	531 ~ 1602 kHz /530 ~ 1610 kHz	9 kHz /10 kHz	+450 kHz	10 kHz
	K, P	1	0	0	0	FM	87.5 ~ 108.0 MHz	100 kHz	+10.7 MHz	50 kHz (25 kHz)
						AM	530 ~ 1610 kHz	10 kHz	+450 kHz	10 kHz
	X	1	1	1	0	FM	87.5 ~ 108.0 MHz	50 kHz	+10.7 MHz	50 kHz (25 kHz)
						AM	531 ~ 1602 kHz	9 kHz	+450 kHz	9 kHz
A-A5L	T, E	1	1	1	1	FM	87.5 ~ 108.0 MHz	50 kHz	+10.7 MHz	50 kHz (25 kHz)
						MW	531 ~ 1602 kHz	9 kHz	+450 kHz	9 kHz
						LW	153 ~ 281 kHz	1 kHz	+450 kHz	1 kHz

1: With diode, 0: Without diode

CIRCUIT DESCRIPTION

10. Test frequency

TYPE / CH	A-A5						A-A5L	
	K, P		Y, M (AM 10 kHz, FM 100 kHz step)		Y, M, X (AM 9 kHz, FM 50 kHz step)		T, E	
1	FM	98.0 MHz	FM	98.0 MHz	FM	98.0 MHz	FM	98.0 MHz
2	FM	108.0 MHz	FM	108.0 MHz	FM	108.0 MHz	FM	108.0 MHz
3	AM	630 KHz	AM	630 KHz	AM	630 KHz	AM	630 KHz
4	AM	990 KHz	AM	990 KHz	AM	990 KHz	AM	990 KHz
5	AM	1440 KHz	AM	1440 KHz	AM	1440 KHz	AM	1440 KHz
6	AM	1610 KHz	AM	1610 KHz	AM	1602 KHz	AM	1602 KHz
7	AM	1700 KHz	FM	87.5 MHz	FM	87.5 MHz	LW	162 KHz
8	FM	87.5 MHz	FM	87.5 MHz	FM	87.5 MHz	LW	216 KHz
9	FM	87.5 MHz	FM	87.5 MHz	FM	87.5 MHz	LW	270 KHz
10	FM	89.1 MHz	FM	89.1 MHz	FM	89.1 MHz	FM	89.1 MHz
11	FM	87.5 MHz	FM	87.5 MHz	FM	87.5 MHz	LW	280 KHz
12	FM	90.0 MHz	FM	90.0 MHz	FM	90.0 MHz	FM	90.0 MHz
13	FM	106.0 MHz	FM	106.0 MHz	FM	106.0 MHz	FM	106.0 MHz
14	AM	530 KHz	AM	530 KHz	AM	531 KHz	AM	531 KHz
15	FM	87.5 MHz	FM	87.5 MHz	FM	87.5 MHz	LW	153 KHz
16 ~ 20	FM	87.5 MHz	FM	87.5 MHz	FM	87.5 MHz	FM	87.5 MHz

11. Expansion port IC: CX-7991 (X14: IC202)

Pin functions

Pin No.	Pin name	I/O	Name	Description
1	P1	O	FRONT RLY	Front speaker relay OFF/ON
2	P2	O	SURR. RLY	S4ch speaker relay OFF/OF
3	P3	O	PRESE RLY	F4ch speaker relay OFF/ON
4	P4	O		No used (Open)
5	P5	O	VFIX	No used OFF/ON
6	P6	O	CDREC	CD REC LED OFF/ON
7	P7	O	SWF	SUPER WOOFER LED OFF/ON
8	P8	O	ALC	No used OFF/ON
9	P9	O		No used (Open)
10	VSS			GND
11	P10	O		No used (Open)
12	P11	O		No used (Open)
13	P12	O		No used (Open)
14	SO	O		No used (Open)
15	SET	I		+ 5 V power supply
16	RESET	I		Reset signal input
17	STB	I	ICLOAD	Strube input
18	DATA	I	ICDATA	Data input
19	CLK	I	ICCLOCK	Clock input
20	VDD			+ 5 V power supply

A-A5/A5L

CIRCUIT DESCRIPTION

Microprocessor: CPX50116-397Q (X14: IC201)

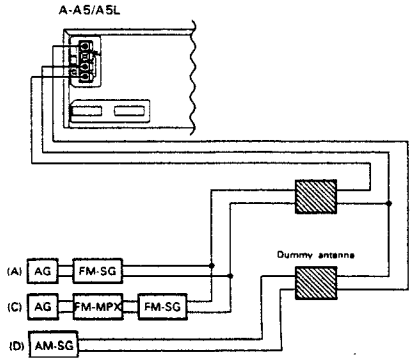
Pin functions

Pin No.	Pin name	I/O	Name	Description
1 ~ 18	S4 ~ S21/PG0 ~ PG3 PK0 ~ PK3, PJ0 ~ PJ3 T15 ~ T10	O	Segment	Segment (h, c, e, d, g, f, b, a, q, r, j, i, k, n, o, p, l, m)
19 ~ 28	S22, S23/T9, T8, T7 ~ T0	O	G10 ~ G1	Grid 10 ~ 1
29 ~ 31	INT, TX, TEX		INT, TX, TEX	No used.
32	RST	I	$\overline{\text{RESET}}$	Reset pin Low: RESET High: NORMAL
33	NC		NC	No used.
34	Vdd		Vdd	+5 V power supply
35	PI0	O	VOLD	Motor volume down Low: STOP High: ACTIVE
36	PI1	O	VOLU	Motor volume up Low: STOP High: ACTIVE
37	PI2	O	KS4	Key scan signal output (KS4)
38	PI3	O	$\overline{\text{AMUTE}}$	Amplifier mute Low: ON High: OFF
39	PB0	O	$\overline{\text{SMUTE}}$	Super woofer mute Low: ON High: OFF
40	PB1	I	PROTECT	Protection detection Low: OFF High: ON
41	PB2	I/O	SDATA	Serial communication DATA
42	PB3	I/O	SBUSY	Serial communication BUSY
43	EC		EC	No used.
44	PX0	I	$\overline{\text{BILINGUAL}}$	No used
45	PX1	I	$\overline{\text{STEREO}}$	Stereo signal detection Low: STEREO High: MONAURAL
46	PX2	I	$\overline{\text{TUNED}}$	SD signal detection Low: TUNED High: OFF
47	PA0	I	$\overline{\text{SPOFF}}$	Head phone use detection Low: Use High: No use
48	PA1	O	TMUTE	Tuner mute Low: OFF High: ON
49	PA2	O	MAIN	No used
50	PA3	O	SUB	No used
51 ~ 54	PF0 ~ PF3	I	KR0 ~ KR3	Key return signal input (KR0 ~ KR3)
55 ~ 58	PE0 ~ PE3	O	KS0 ~ KS3	Key scan signal output (KS0 ~ KS3)
59	PY0	O	$\overline{\text{VOLLED}}$	Volume LED drive Low: ON High: OFF
60	PY1	O	$\overline{\text{MONO}}$	Forced monaural output Low: ON High: OFF
61	PY2	I	CE	Chip enable signal input Low: OFF High: ON
62	PY3	I	REMIN	Remote control signal input
63	PD0	O	$\overline{\text{ICRST}}$	Expansion port IC RESET
64	PD1	O	ICLOAD	Expansion port IC STROBE
65	PD2	O	ICDATA	Expansion port IC DATA
66	PD3	O	ICCLOCK	Expansion port IC CLOCK
67 ~ 70	PC0 ~ PC3	I	KR4 ~ KR7	Key return signal input (KR4 ~ KR7)
71	Vss		Vss	GND
72	XTAL		XTAL	Crystal oscillator input (4.19 MHz)
73	NC		NC	No used.
74	EXTAL		EXTAL	Crystal oscillator input (4.19 MHz)
75	Vref		Vref	No used.
76	Vfdp		Vfdp	-30 V power supply.
77	S0/PH0	O	POWER	Power ON/OFF signal output Low: OFF High: ON
78	S1/PH1	O	DT	PLL IC (LM7001) DATA
79	S2/PH2	O	CLK	PLL IC (LM7001) CLOCK
80	S3/PH3	O	PCE	PLL IC (LM7001) STROBE

ADJUSTMENT

1. TUNER UNIT

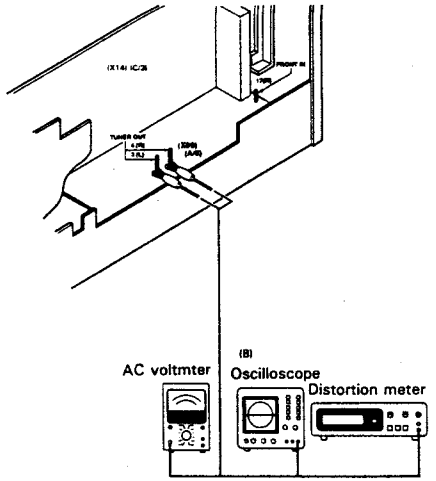
No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION			SELECTOR: FM				
1	DISCRIMINATOR	(A) 98.0MHz 1kHz,±75kHz dev (K,P,M,Y,X type) 1kHz,±40kHz dev (E,T type) 60dBμ (ANT input)	Connect a DC voltmeter between TP3 and TP4. (X14-)	AUTO or MONO 98.0MHz	L2 (X14-)	0V	(a)
2	DISTORTION (STEREO)	(C) 98.0MHz 1kHz,±68.25kHz dev Pilot:±7.5kHz dev (K,P,M,Y,X type) 1kHz,±40kHz dev Pilot:±6kHz dev (E,T type) 60dBμ (ANT input)	(B)	MONO 98.0MHz	IFT (W02-)	Minimum distortion	
3	SEPARATION	(C) 98.0MHz 1kHz,±40kHz dev Pilot ±6kHz dev Selector:L or R 60dBμ (ANT input)	(B)	AUTO 98.0MHz	VR5 (X14-)	Minimum crosstalk	
4	TUNING LEVEL	(A) 98.0MHz 1kHz,±75kHz dev (K,P,M,Y,X type) 1kHz,±45kHz dev (E,T type) 14dBμ(ANT input) 75Ω 18dBμ(ANT input)300Ω	(B)	AUTO or MONO 98.0MHz	VR1 (X14-)	Adjust VR1 and stop at the point where ED201(TUNED) goes on.	
AM (MW) SELECTION			SELECTOR:AM(MW)				
(1)	TUNING LEVEL	(D) 1008kHz 400Hz,30% mod 26dBμ(ANT input)	(B)	1008kHz	VR3 (X14-)	Adjust VR3 and stop at the point where ED201 (TUNED) goes on.	



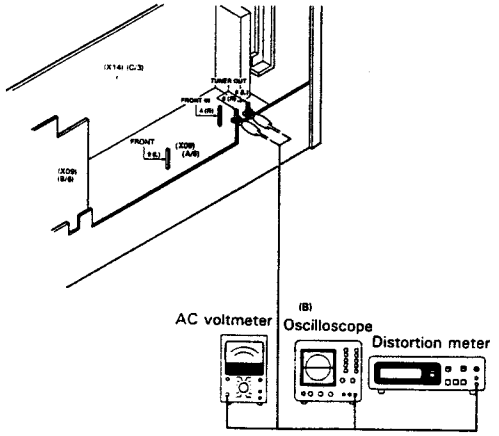
A-A5/A5L

ADJUSTMENT

(K,P,T,E type)

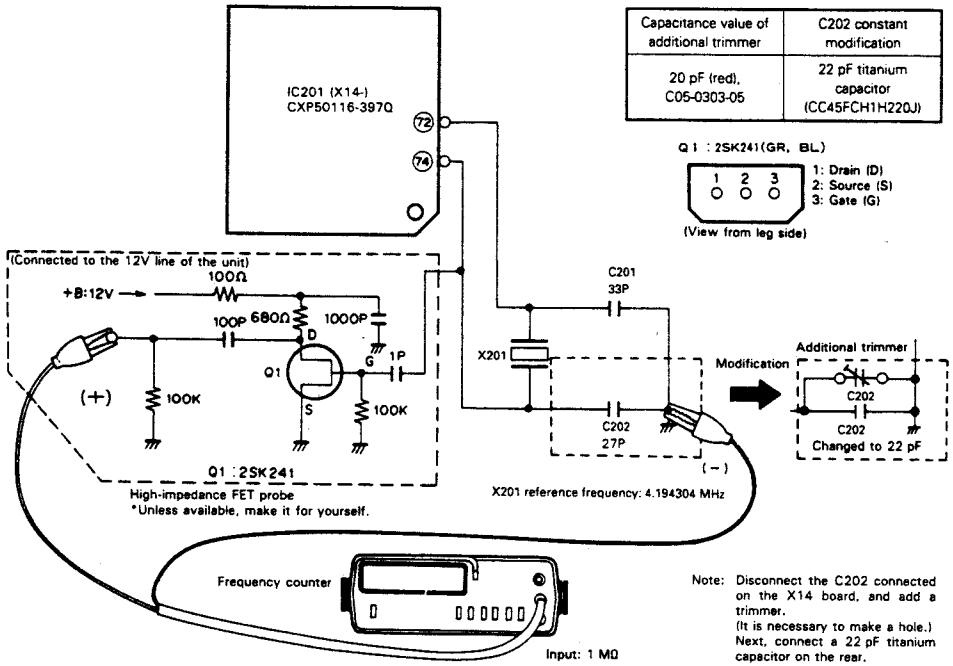


(Y,M,X type)



ADJUSTMENT

2. Timer accuracy improvement method



Capacitance value of additional trimmer	C202 constant modification
20 pF (red), C05-0303-05	22 pF titanium capacitor (CC45FCH1H220J)

Q1 : 2SK241(GR, BL)

Note: Disconnect the C202 connected on the X14 board, and add a trimmer.
(It is necessary to make a hole.)
Next, connect a 22 pF titanium capacitor on the rear.

The timer accuracy is within ±40 seconds for one month as a standard. For improved timer accuracy, perform the following procedure:

(1) If the timer accuracy is without the standard, replace X201 (L77-1176-05) near the microprocessor IC on a printed board (X14-)

(2) Even if within the standard, for further improved accuracy, change the constant of C202 in the crystal oscillation circuit of microprocessor IC201 and add a trimmer.

Adjustment method (Use a high-impedance buffer to avoid frequency deviation.)
Connect a high-accuracy frequency counter to pin 74 by way of the FET probe shown above, and adjust the frequency fully up to the first digit of the X201 reference frequency 4,194,304 Hz. *(Connect the negative (−) side of the frequency counter to the* GND side of C202.)

Note (a) As regards the positive (+) side of the frequency counter, arrange as short a distance as possible between pin 74 of IC201 and 1P of the input stage of the FET probe.

Note (b) Perform the trimmer adjustment after energization of around 10 minutes at normal temperature.

(3) Monthly error calculation method
For example, when the result of measurement at pin 74 by the frequency counter is fx = 4,194,275 Hz...
(Reference frequency fo = 4,194,304 [Hz])

$$\text{Monthly error [sec]} = \frac{fx - fo}{fo} \times \text{the number of seconds}$$

taken for one month

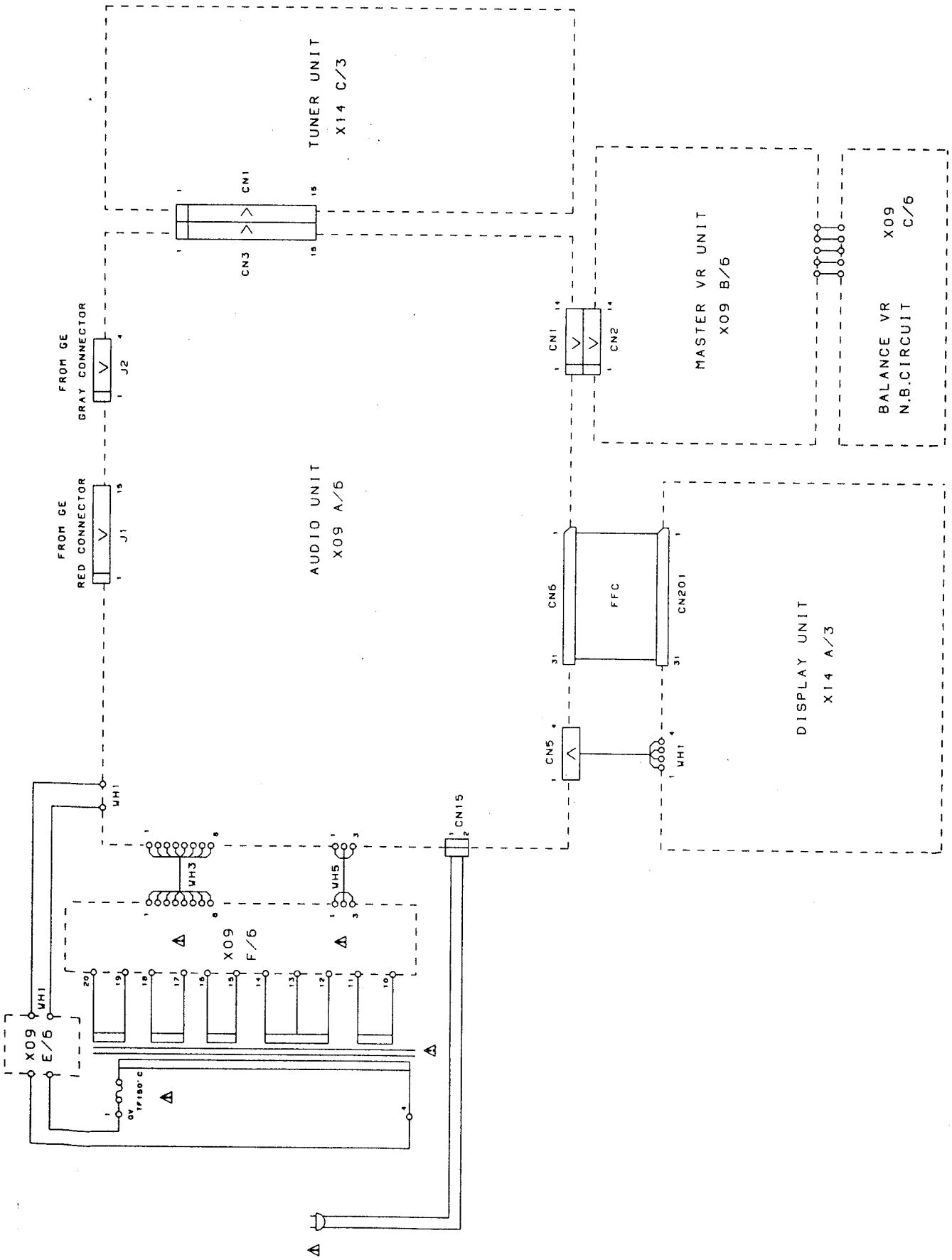
$$= \frac{4,194,275 - 4,194,304}{4,194,304} \times (60 \times 60 \times 24 \times 30)$$

$$= -17.9 \text{ [sec]}$$

* A minus value as the monthly error means a loss.

WIRING DIAGRAM

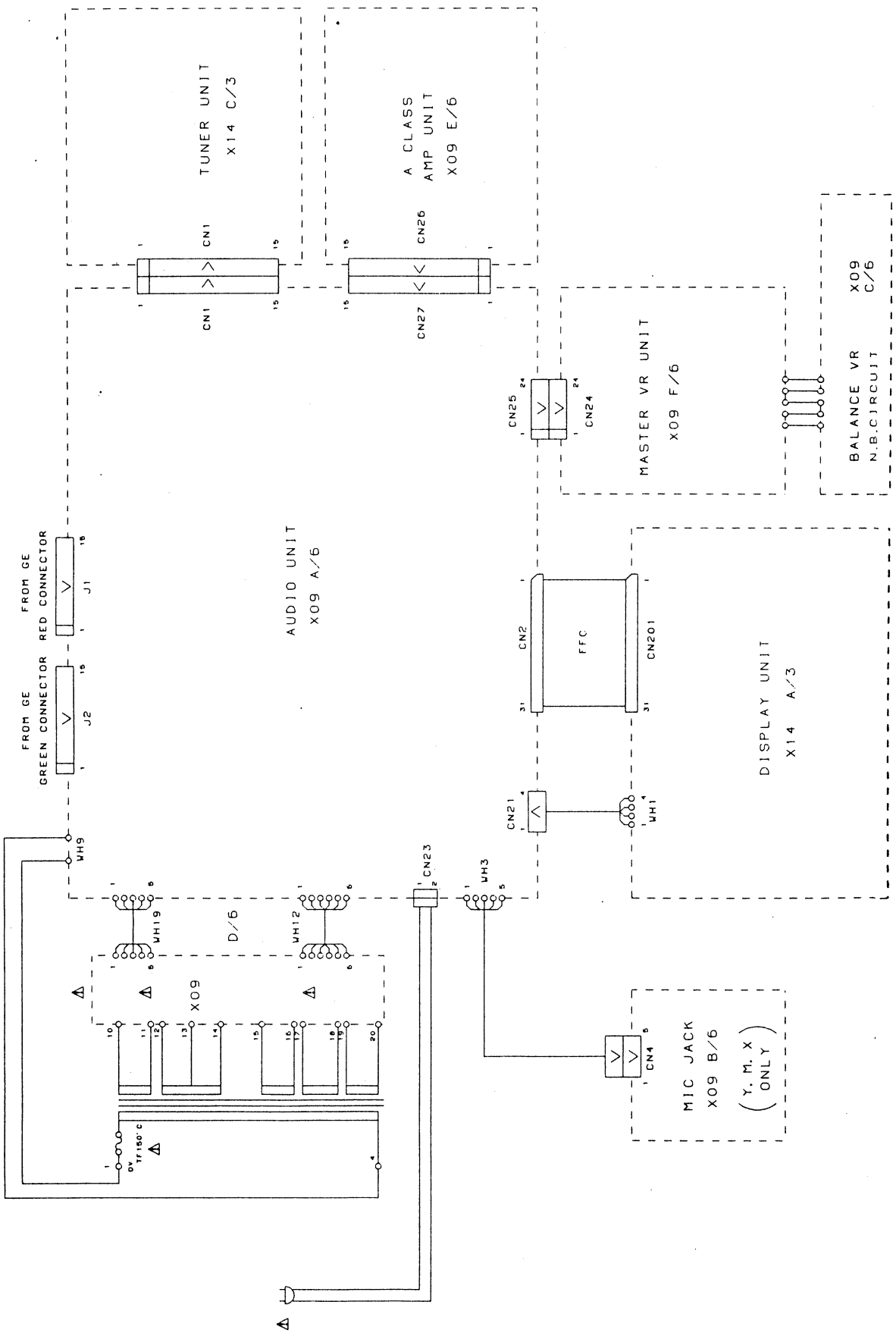
<K,P,T,E type>



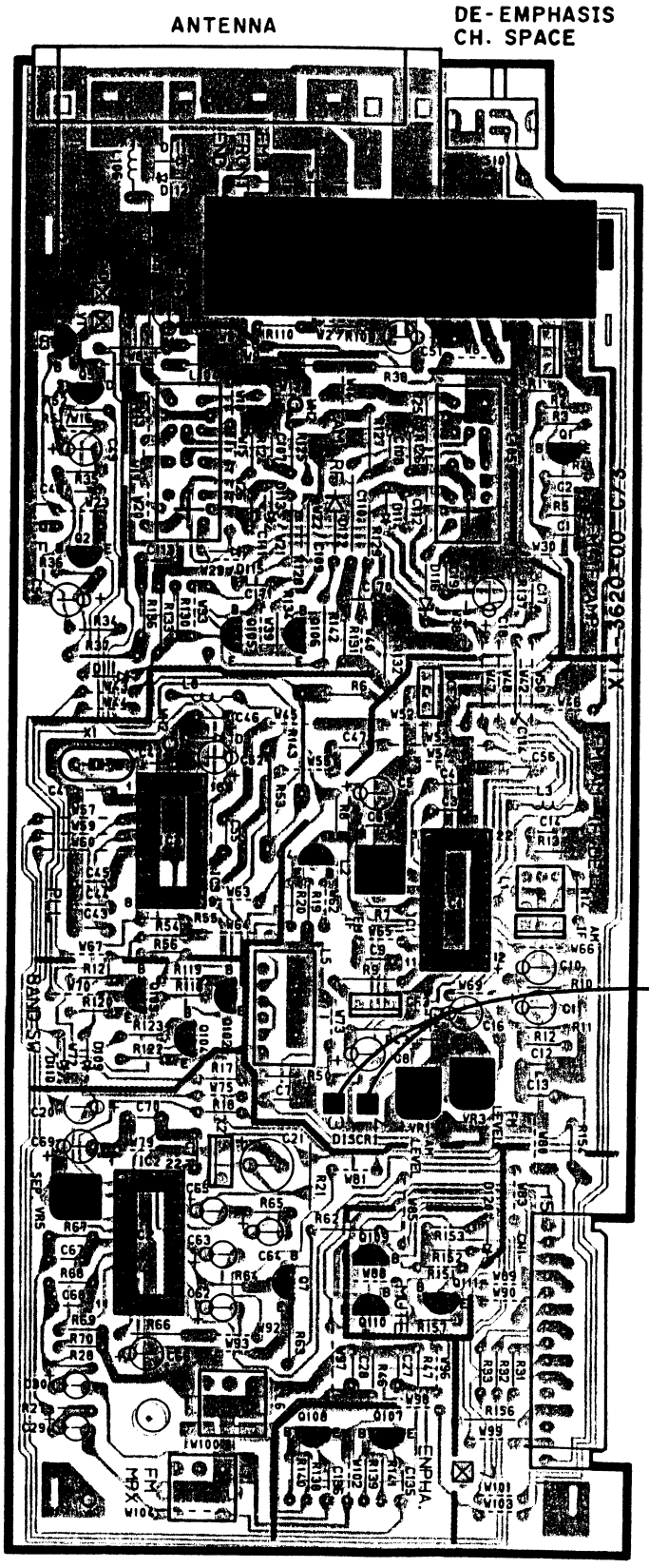
A-A5/A5L

WIRING DIAGRAM

<Y,M,X type>



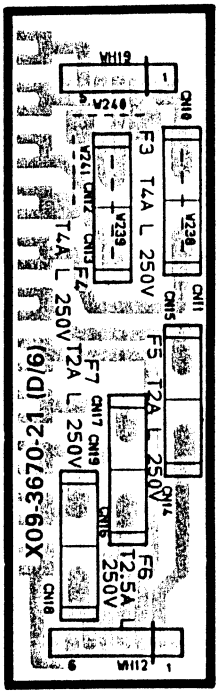
PC BOARD (Component side view)



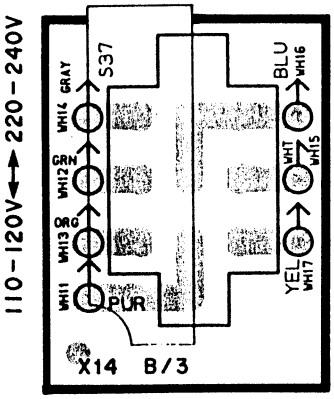
Refer to the schematic diagram for the values of registers and capacitors.

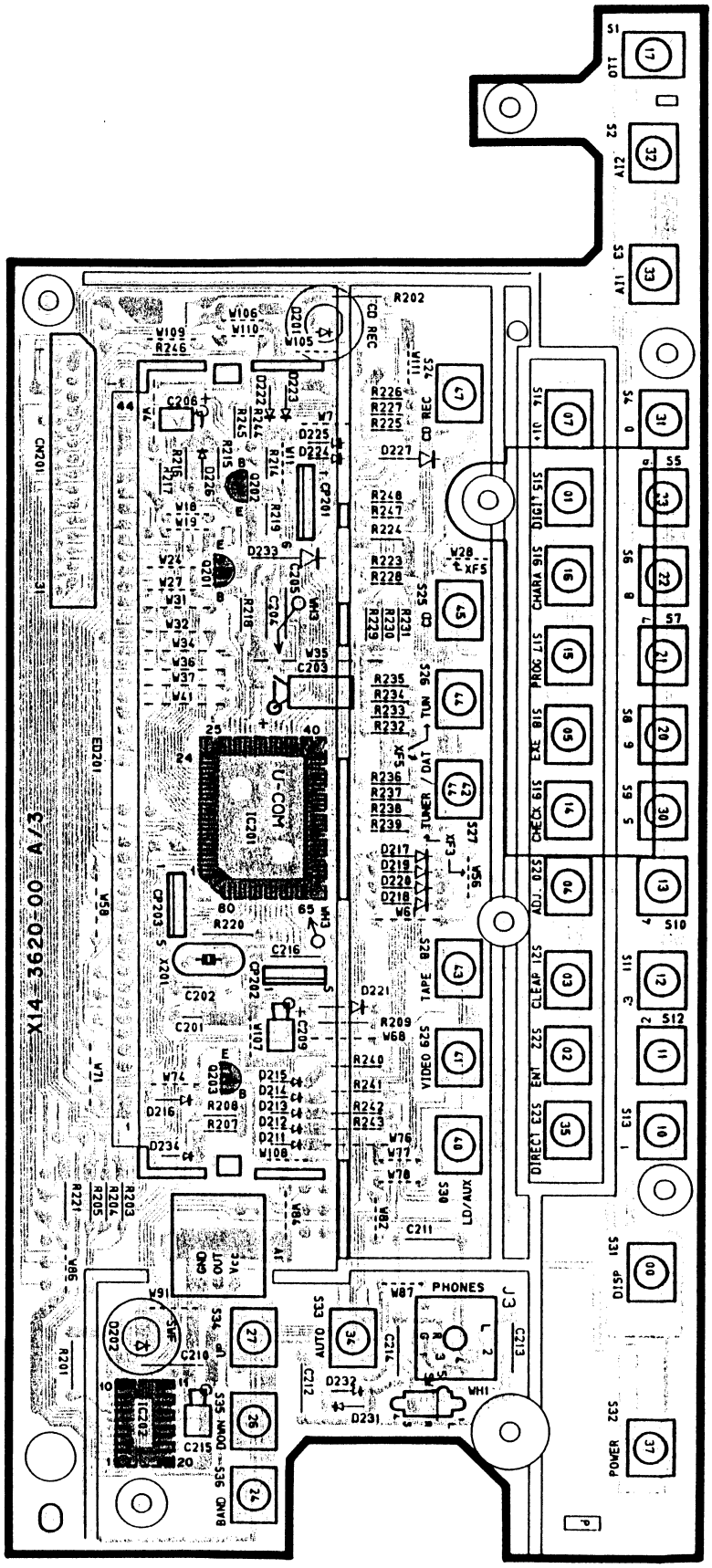
PC BOARD (Component side view)

(Y,M,X type only)



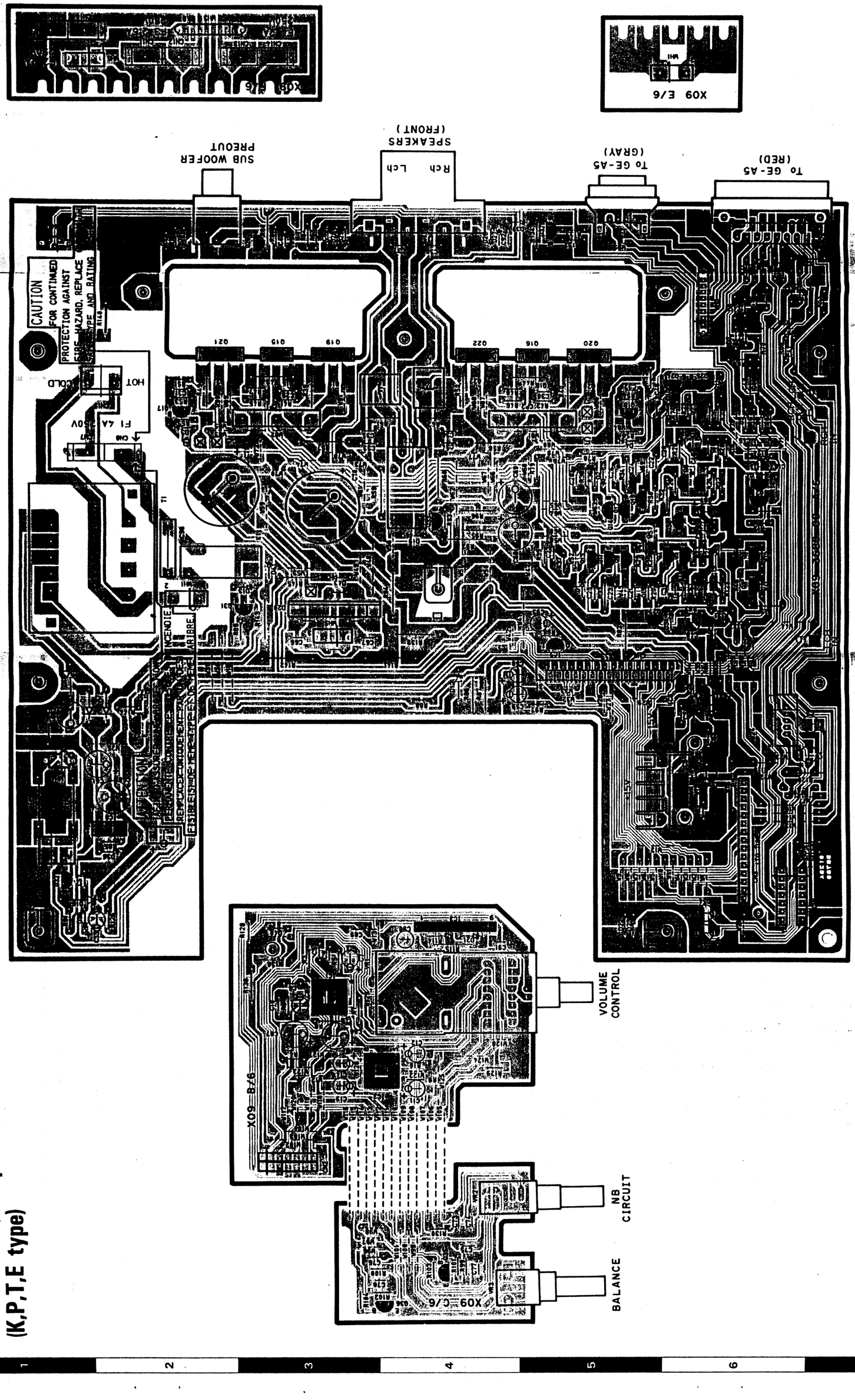
(Y,M type only)





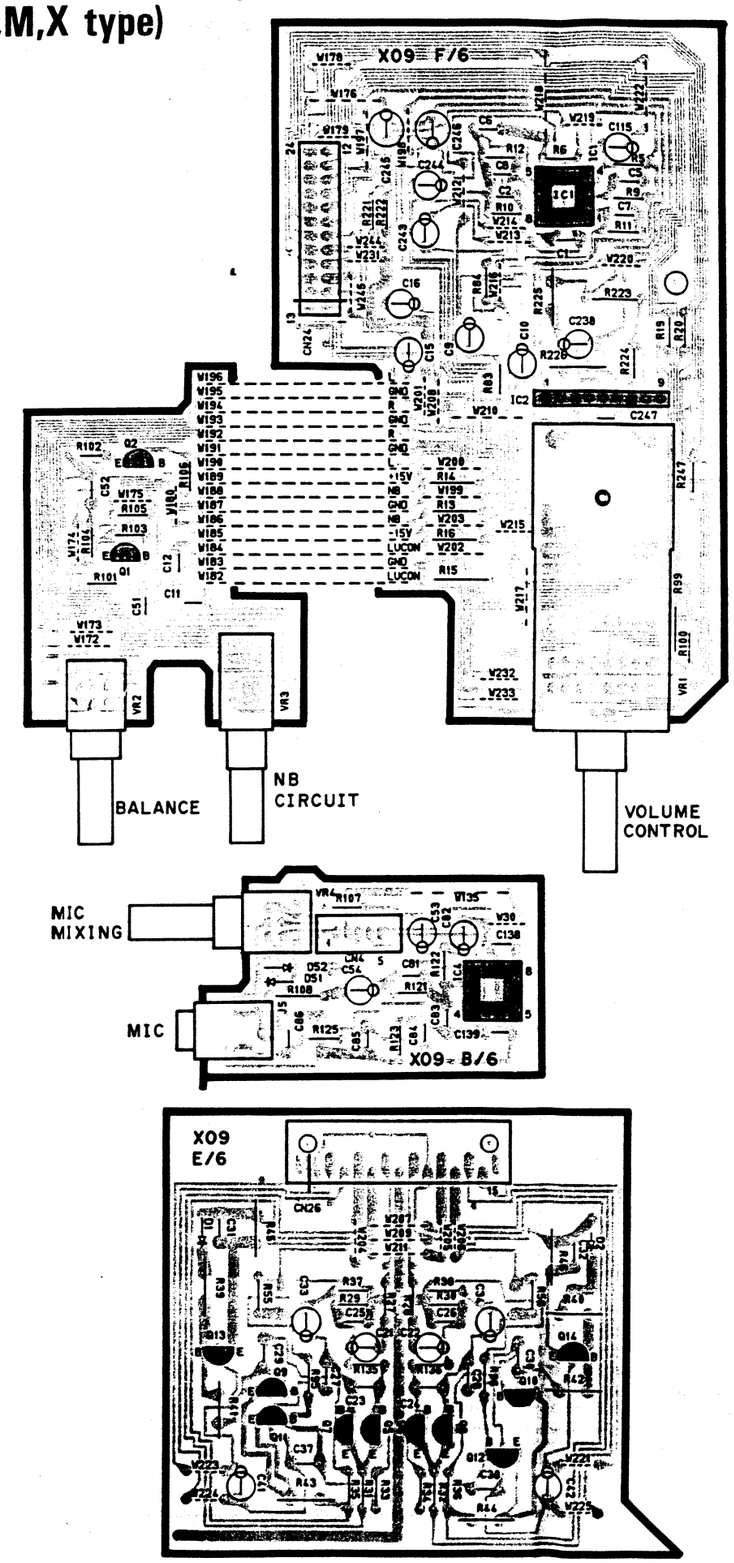
Refer to the schematic diagram for the values of registers and capacitors.

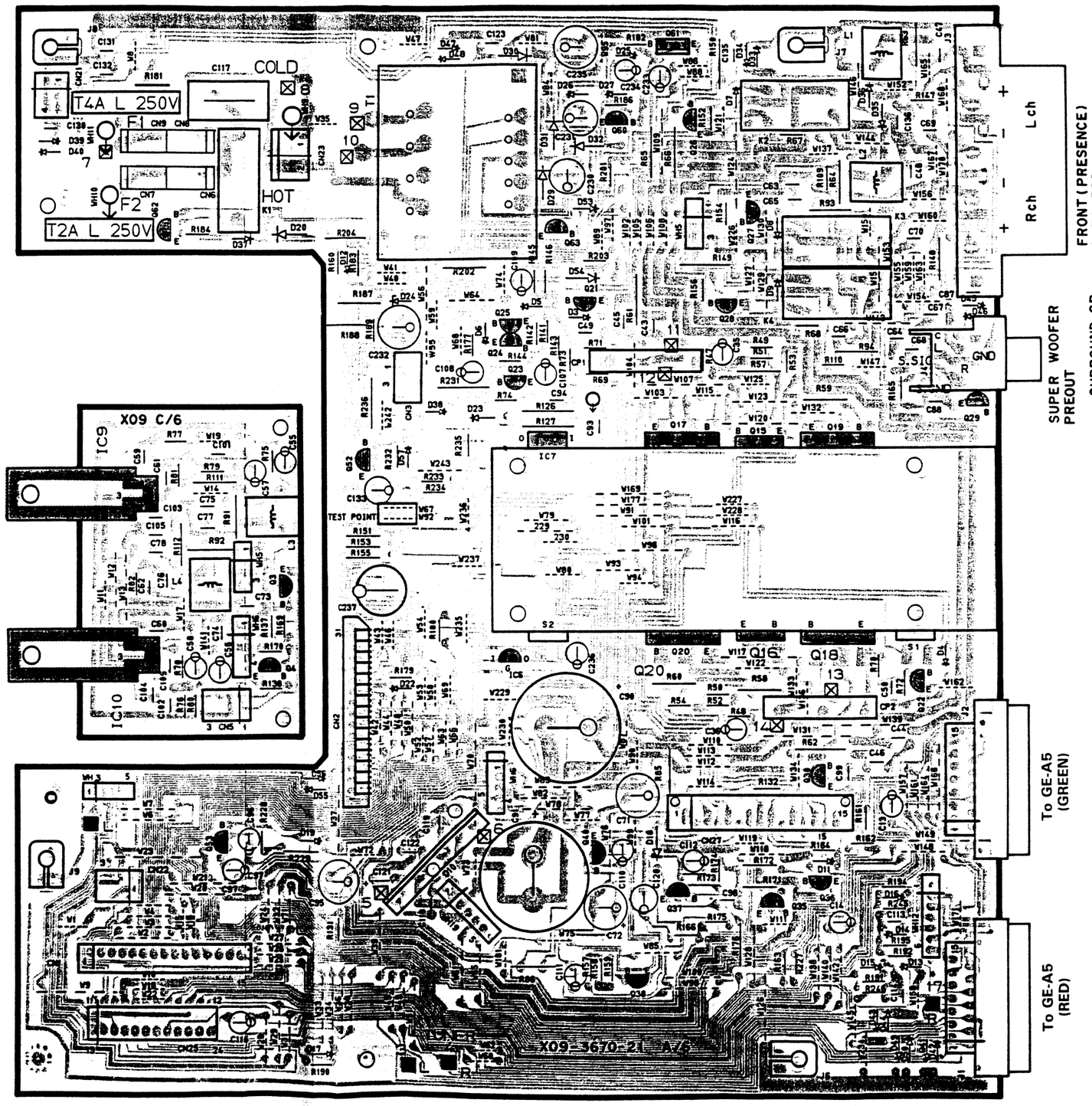
PC BOARD (Component side view)
(K,P,T,E type)



Refer to the schematic diagram for the values of registers and capacitors.

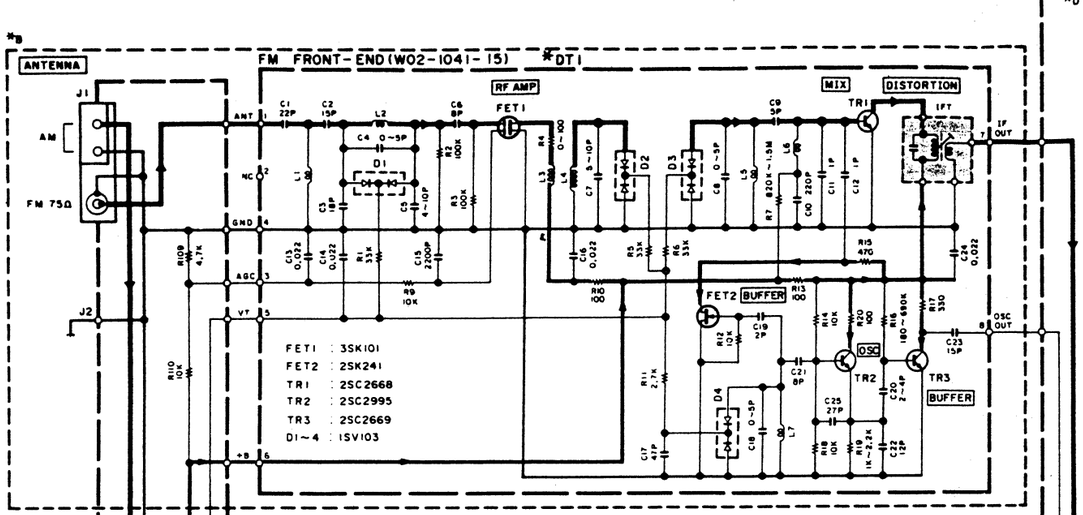
PC BOARD (Component side view)
(Y,M,X type)

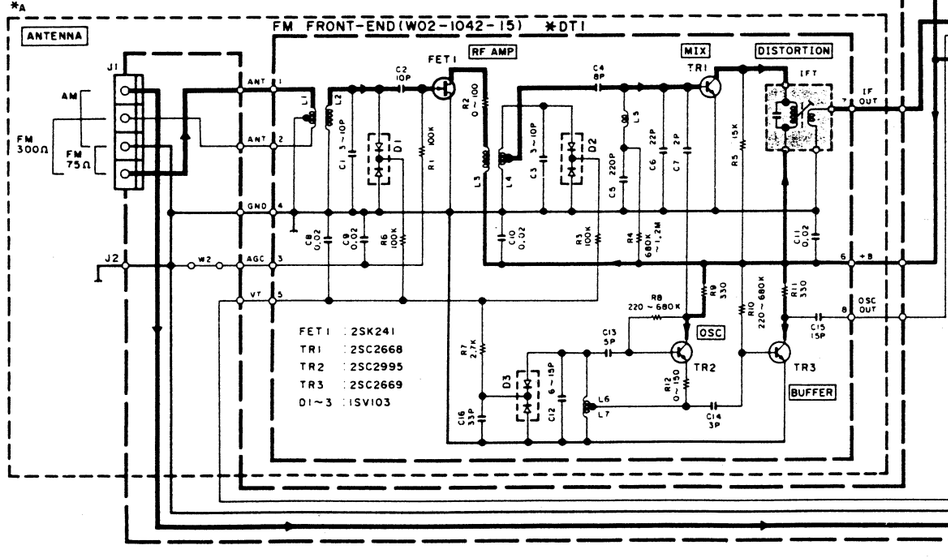


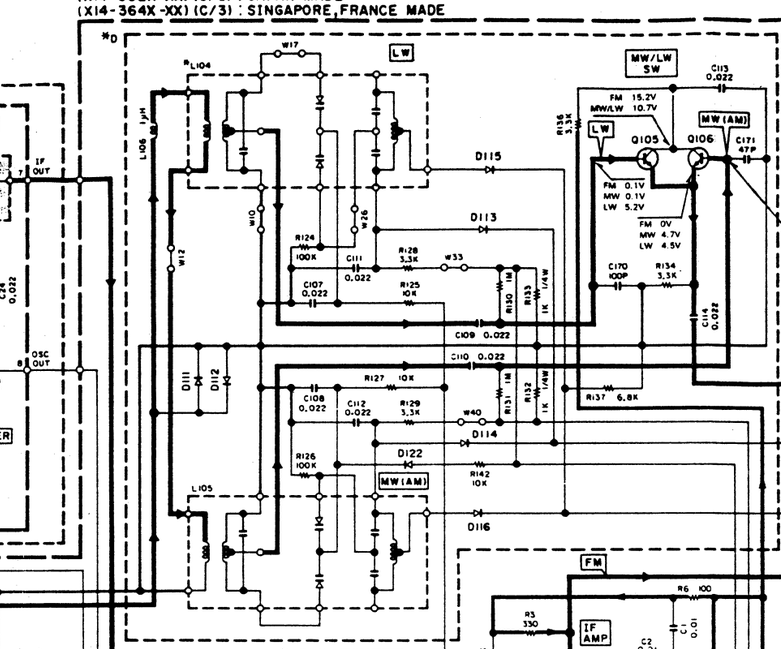


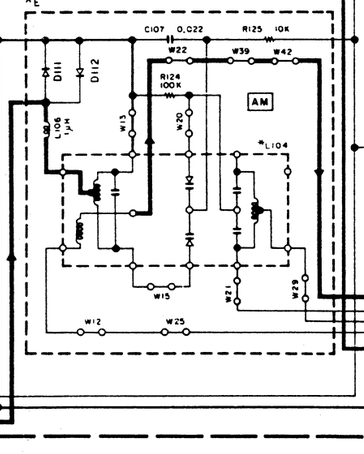
Refer to the schematic diagram for the values of registers and capacitors.

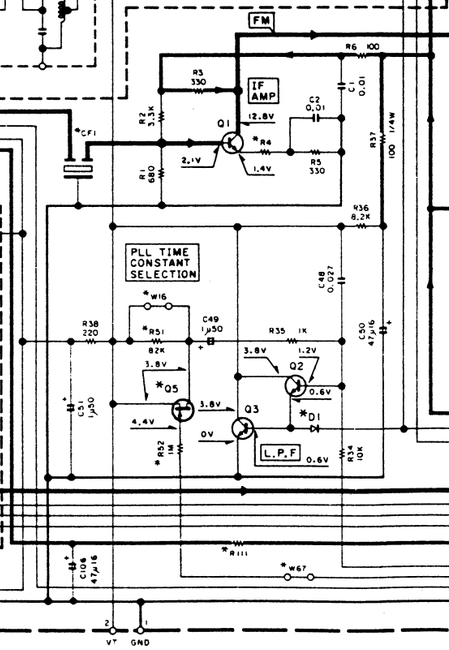
(X14-362X-XX) (C/3) : JAPAN MADE
(X14-364X-XX) (C/3) : SINGAPORE, FRANCE MADE

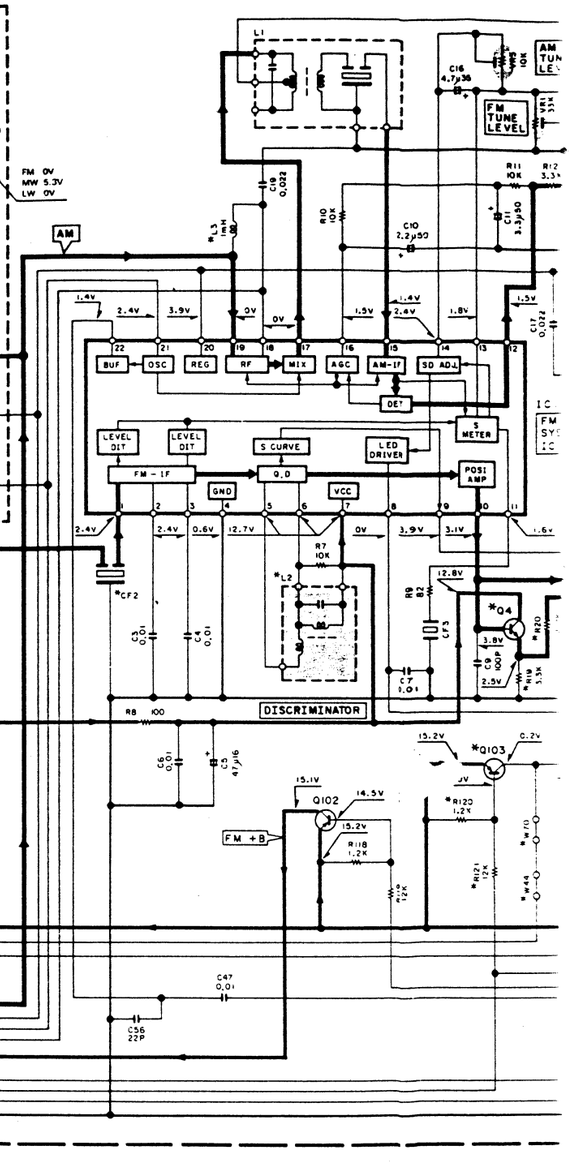








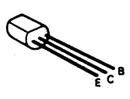




A-AS/ASL

PRODUCT-P	MODEL NAME	DESTINATION COUNTRY	DESTINATION ABB	UNIT NAME	A	B	C	D	E	R4	R14	R17	R19,20 50-52,54 :20 :21	R43	R46, 47	R67 68	R111	C27, 28	C67, 68	Q4,5 103	D1,109, 110	CF1,2 (L72-)	DT1 (W02-)	S101	L2 (L39-)	L3,5-7	L104 (L38-)	W16,,22,62, 72,100,104	W44, 67,70	W98 101-103
JAPAN MADE	A-AS	U.S.A CANADA	K P	X14-3620-12	YES	NO	NO	NO	YES	56	4.7K	15K	NO	12K	39K	100K	330	0.022	100P	NO	NO	0531	1042	NO	0439	NO	0188	YES	NO	NO
		PX GENERAL MARKET	Y M	X14-3620-22	YES	NO	YES	NO	YES	56	4.7K	5K	NO	27K	39K	100K	330	0.015	100P	NO	NO	0531	1042	YES	0494	NO	0189	YES	NO	YES
		AUSTRALIA	X	X14-3620-72	YES	NO	NO	NO	YES	56	4.7K	15K	NO	27K	39K	100K	330	0.015	100P	NO	NO	0531	1042	NO	0494	NO	0189	YES	NO	NO
	A-ASL	EUROPE ENGLAND	T E	X14-3622-72	NO	YES	NO	YES	NO	22	2.7K	2K	YES	27K	3.3K	180K	220	3900P	270P	YES	YES	0536	1041	NO	0494	YES	0195	NO	YES	NO
SINGAPORE MADE	A-AS	U.S.A CANADA	K P	X14-3640-11	YES	NO	NO	NO	YES	56	4.7K	15K	NO	12K	39K	100K	330	0.022	100P	NO	NO	0531	1042	NO	0439	NO	0189	YES	NO	NO
		GENERAL MARKET	M	X14-3640-22	YES	NO	YES	NO	YES	56	4.7K	15K	NO	27K	39K	100K	330	0.015	100P	NO	NO	0531	1042	YES	0494	NO	0189	YES	NO	YES
		AUSTRALIA	X	X14-3640-72	YES	NO	NO	NO	YES	56	4.7K	15K	NO	27K	39K	100K	330	0.015	100P	NO	NO	0531	1042	NO	0494	NO	0189	YES	NO	NO
	A-ASL	EUROPE ENGLAND	T E	X14-3642-72	NO	YES	NO	YES	NO	22	2.7K	2K	YES	27K	3.3K	180K	220	3900P	270P	YES	YES	0536	1041	NO	0494	YES	0195	NO	YES	NO
FRANCE MADE	A-ASL	EUROPE ENGLAND	T E	X14-3642-73	NO	YES	NO	YES	NO	22	2.7K	2K	YES	27K	3.3K	180K	220	3900P	270P	YES	YES	0536	1041	NO	0494	YES	0195	NO	YES	NO

JA101 2SB764
JC501 2SC1845
2SA1123 2SC1923
2SA1534A 2SC2003
2SA954 2SC2878
2SA992 2SD1302



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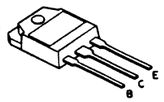
2SD2340



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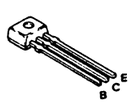
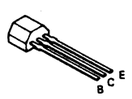
2SC2785

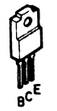


DTC124ES
2SA1048
2SA933S
2SC1740S
2SC2458

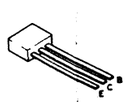


2SC4137

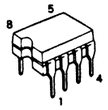
2SD2061



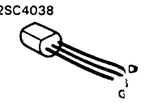
UN4212
2SA1309A
2SC3311A



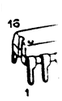
NJM4565D-D

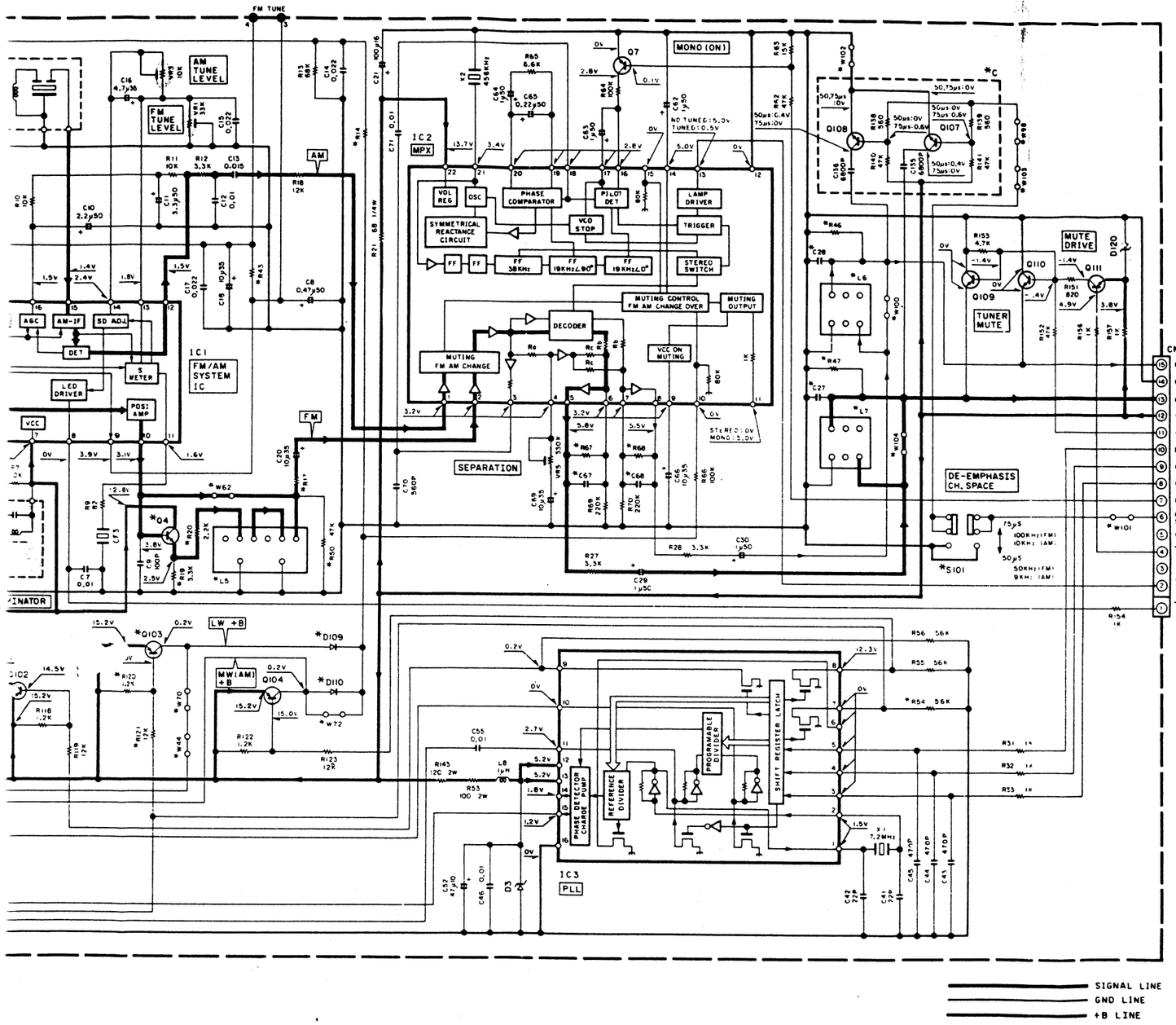


2SC4038



LM7001





A-A5/A5L(K)(1/4)

A-A5/A7(1/4)
IC1 LA1265
IC2 LA3401
IC3 LM7001

Q1	2SC1923(R,O)
Q2	2SC1845(F,E)
Q3,4,7,105~108	2SC2458(Y,GR) or 2SC3311(A,O,R) or 2SC1740S(O,R) or 2SC2785(F,E) or JC501(P,Q)
Q5	2SK364(GR,BL) or 2SK163(L,M)
Q102~104,111	2SA1048(Y,GR) or 2SA1309A(O,R) or 2SA933S(Q,R) or 2SA1175(F,E) or JA101(P,Q)
Q109~110	2SD1302(S,T)
D1,109~116,122	1SS133 or HSS104 or 1N4148
D3	RD5.1ES(B2) or HZS5.1N(B2) or BZX55-C5V1
D120	RD3.3ES(B2) or HZS3.3N(B2) or BZX55-C3V3

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

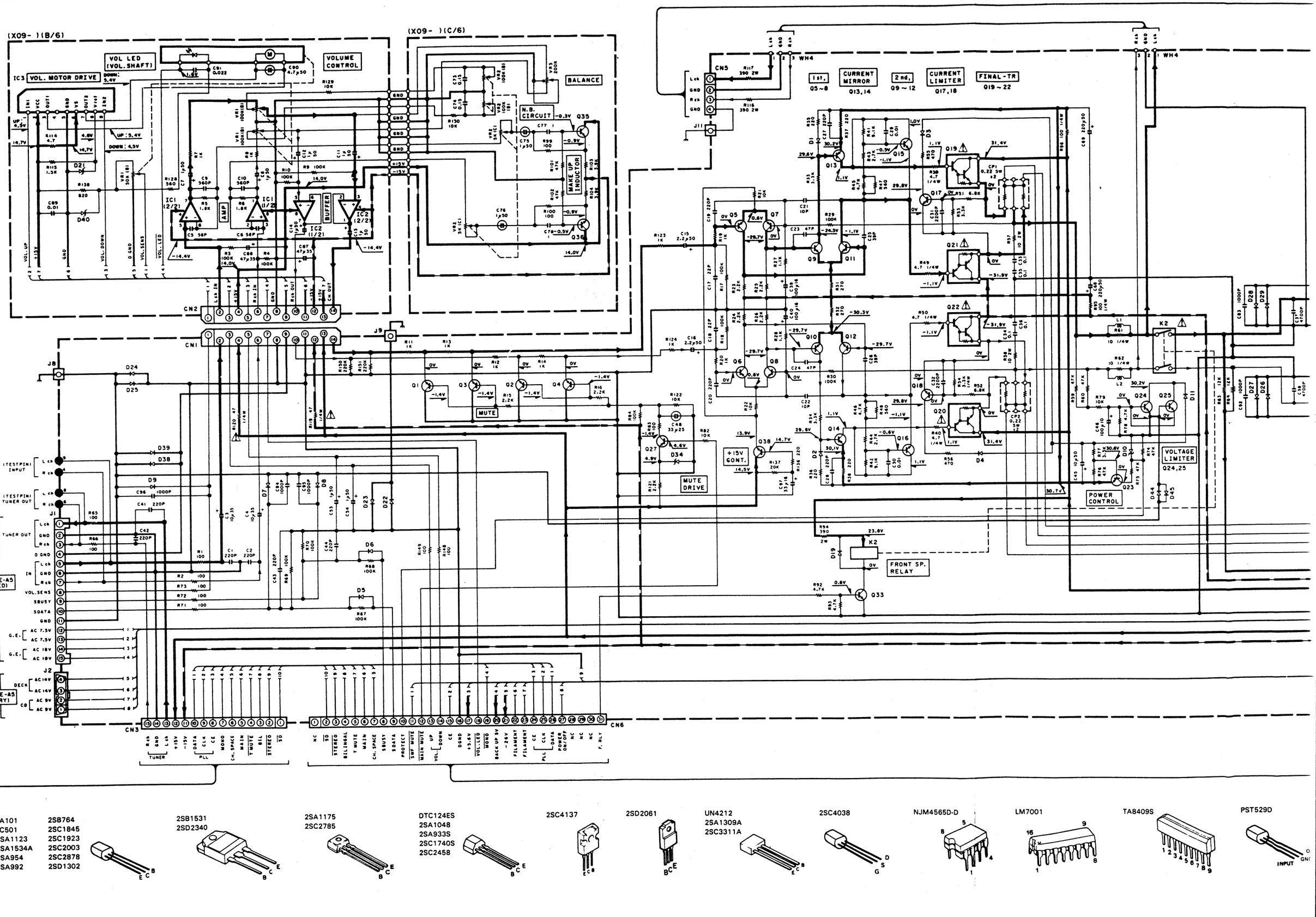
DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

38
LM7001
TA8409S
PST529D
PST529C
UPC7805AHF
UPC7815AHF
2SK163
2SK364
LA1265
LA3401
CX-7991
TA7805S
TA7815S
TA79015S

Y05-2670-11

A-A5/A5L

KENWOOD



JA101 JC501 2SA1123 2SA1534A 2SA954 2SA992	2SB764 2SC1845 2SC1923 2SC2003 2SC2878 2SD1302	2SB1531 2SD2340	2SA1175 2SC2785	DTC124ES 2SA1048 2SA933S 2SC1740S 2SC2458	2SC4137	2SD2061	UN4212 2SA1309A 2SC3311A	2SC4038	NJM4565D-D	LM7001	TA8409S	PST529D

PRODUCT-P	MODEL NAME	DESTINATION COUNTRY	ABB	UNIT NAME	F1	F2 4	F3	R140
JAPAN MADE	A-A5	U S A CANADA	K P	X09-3680-11	2 5A 250V	2A 250V	2 5A 250V	YES
	A-A5L	ENGLAND	T	X09-3680-51	T1 25A 250V	T2A 250V	T2A 250V	NO
		EUROPE	E	X09-3682-71				
SINGAPORE MADE	A-A5	U S A CANADA	K P	X09-3720-10	2 5A 250V	2A 250V	2 5A 250V	YES
	A-A5L	ENGLAND	T	X09-3720-51	T1 25A 250V	T2A 250V	T2A 250V	NO
		EUROPE	E	X09-3722-71				
FRANCE MADE	A-A5L	ENGLAND	T	X09-3720-52	T1 25A 250V	T2A 250V	T2A 250V	NO
		EUROPE	E	X09-3722-72				

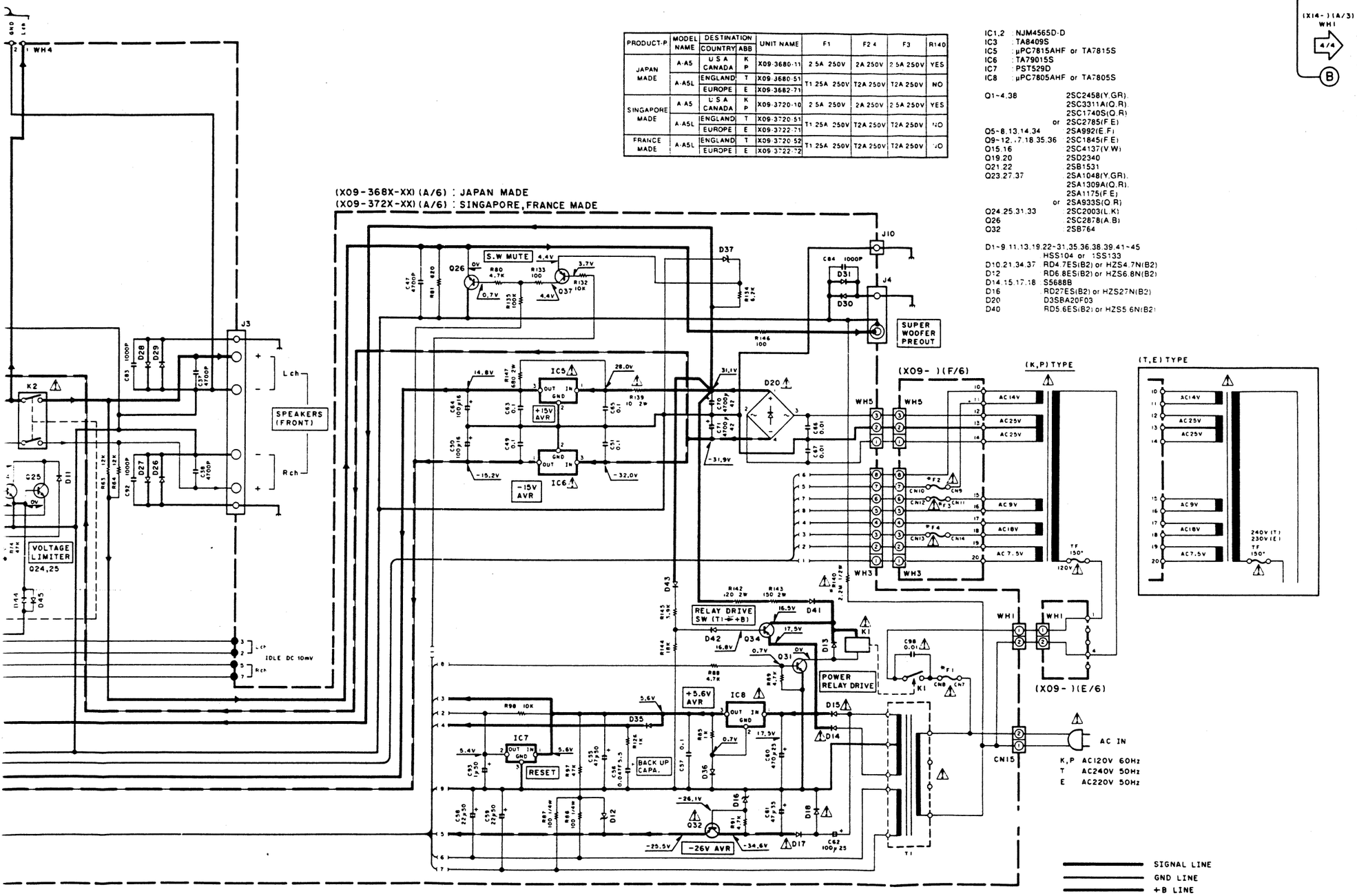
IC1,2 : NJM4565D-D
IC3 : TA8409S
IC5 : μPC7815AHF or TA7815S
IC6 : TA79015S
IC7 : PST529D
IC8 : μPC7805AHF or TA7805S

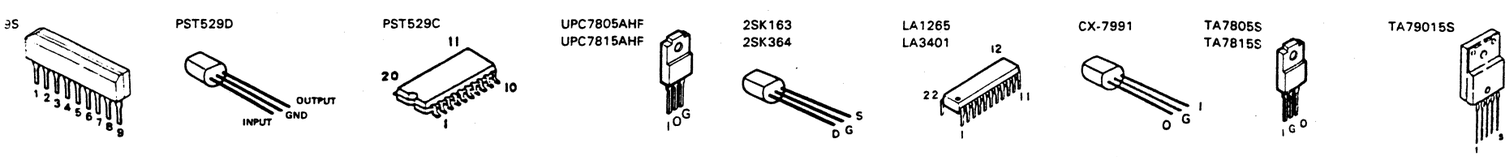
Q1~4,38 2SC2458(Y,GR),
2SC3311A(Q,R),
2SC1740S(Q,R)
or 2SC2785(F,E)
Q5~8,13,14,34 2SA992(E,F),
Q9~12,17,18,35,36 2SC1845(F,E)
Q15,16 2SC4137(V,W)
Q19,20 2SD2340
Q21,22 2SB1531
Q23,27,37 2SA1048(Y,GR),
2SA1309A(Q,R),
2SA1175(F,E)
or 2SA933S(Q,R)
Q24,25,31,33 2SC2003(L,K)
Q26 2SC2878(A,B)
Q32 2SB764

D1~9,11,13,19,22~31,35,36,38,39,41~45 HSS104 or 1SS133
D10,21,34,37 RD4.7ES(B2) or HZS4.7N(B2)
D12 RD6.8ES(B2) or HZS6.8N(B2)
D14,15,17,18 S5688B
D16 RD27ES(B2) or HZS27N(B2)
D20 D3SBA20F03
D40 RD5.6ES(B2) or HZS5.6N(B2)

(X14-)(A/3) WH1 4/4 B

(X09-368X-XX)(A/6) : JAPAN MADE
(X09-372X-XX)(A/6) : SINGAPORE,FRANCE MADE





CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

(K,P,T,E type)

Y05-2670-11

A-A5/A5L

KENWOOD

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

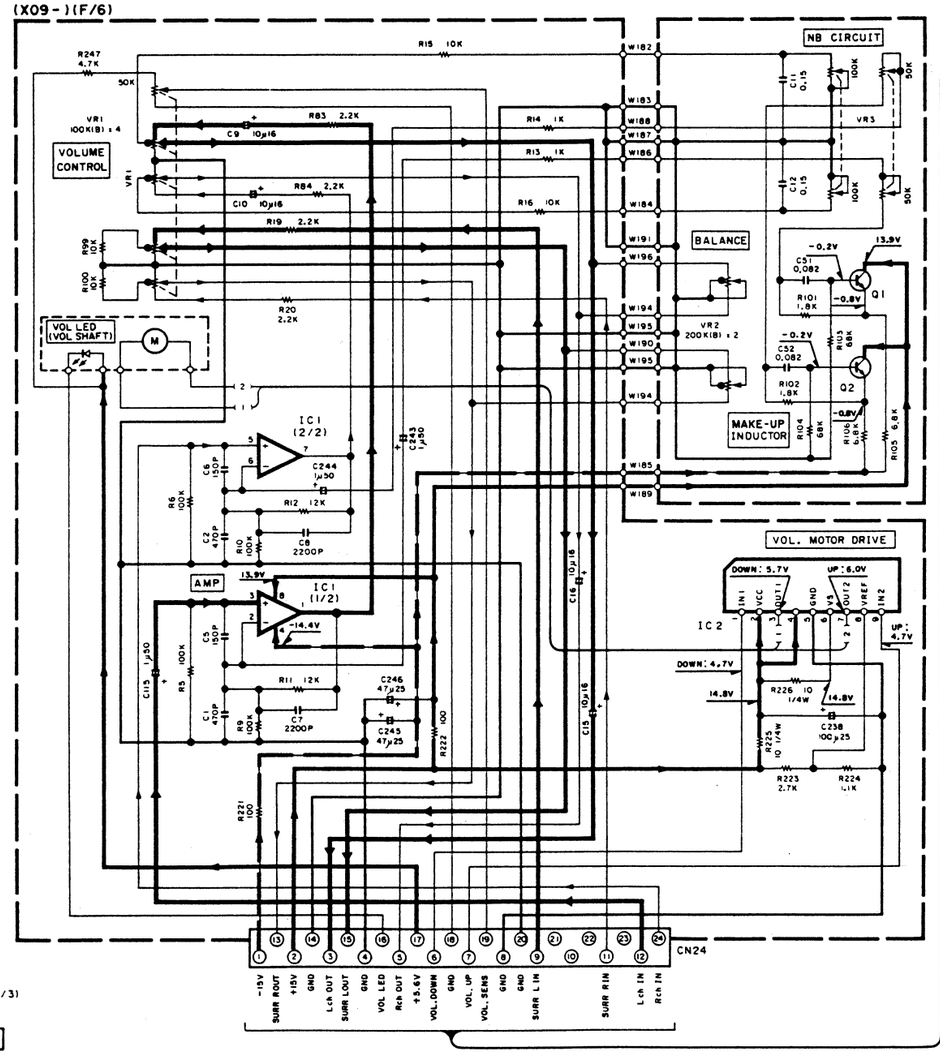
DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

IC1,4 : NJM4565D-D
IC2 : TA8409S
IC6 : PST529C
IC7 : TA7815S or μPC7815AHF

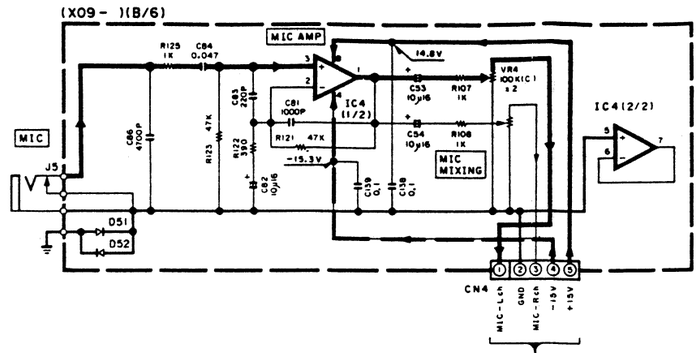
Q1,2,9-12,21,22,24,25 : 2SC1845(F,E)
Q5-8,13,14,63 : 2SA992(F,E)
Q15,16 : 2SC4137(V,W)
Q17,18 : 2SD2340
Q19,20 : 2SB1531
Q23 : 2SA1123(R,S)
Q26,52,62 : 2SC2003(L,K)
Q29,35,36 : 2SC2878(B)
Q30,37 : 2SA933S(Q,R) or 2SA1175(F,E)
or 2SA1309A(Q,R)
or 2SA1048(Y,GR)
Q38 : 2SC1740S(Q,R)
or 2SC2785(F,E)
or 2SC2458(Y,GR)
or 2SC3311A(Q,R)
Q40 : DTC124ES or UN4212
or RN1203
Q53 : 2SA954(L,K)
Q60 : 2SA1534A(R,S)
Q61 : 2SD2061(E,F,G)

D1-5,7,12,15-17,22,23,33-44,47-58 : HSS104A or 1SS131
D6,11,18 : HZS4.7N(B) or RD4.7ES(B)
D10 : D5SBA20F03 or RBV-602LFA
D13,14 : HZS5.6N(B2) or RD5.6ES(B2)
D19 : HZS16N(B2) or RD16ES(B2)
D20,29-32 : S5688B or 1SR139-100
D24 : HZS6.8N(B2) or RD6.8ES(B2)
D25 : HZS6.2N(B2) or RD6.2ES(B2)
D26 : HZS11N(B2) or RD11ES(B2)
D27 : HZS16N or RD16ES(B2)

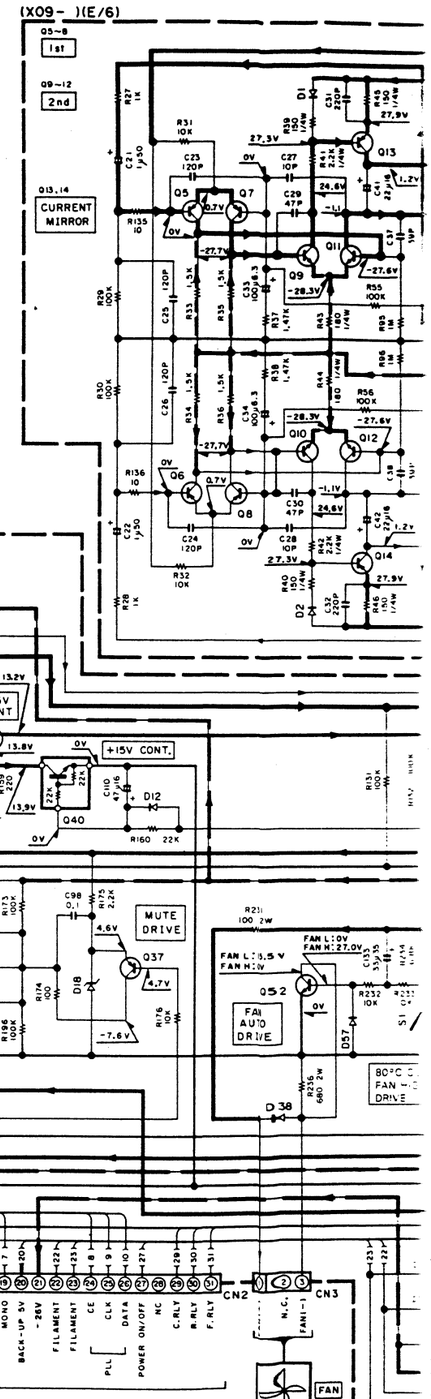
(X09-)(F/6)



(X09-)(B/6)



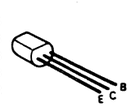
(X09-)(E/6)



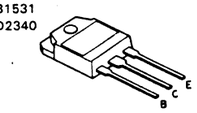
(X14-)(C/3) CN1 1/4

(A)

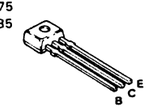
JA101 JC501 2SA1123 2SA1534A 2SA954 2SA992 — 2SB764 2SC1845 2SC1923 2SC2003 2SC2878 2SD1302



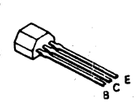
2SB1531 2SD2340



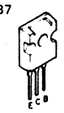
2SA1175 2SC2785



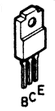
DTC124ES 2SA1048 2SA933S 2SC1740S 2SC2458



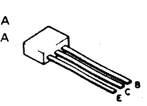
2SC4137



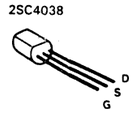
2SD2061



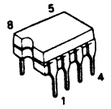
UN4212 2SA1309A 2SC3311A



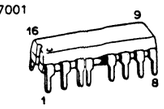
2SC4038



NJM4565D-D



LM7001



TA840

(X09-367X-XX)(A/6) : JAPAN MADE
(X09-371X-XX)(A/6) : SINGAPORE MADE

PRODUCT-P	MODEL NAME	DESTINATION COUNTRY	ABB	UNIT NAME	F1	W35
JAPAN MADE	A-A5	PX GENERAL MARKET	Y M	X09-3670-22	YES	NO
		AUSTRALIA	X	X09-3670-72	NO	YES
SINGAPORE MADE	A-A5	GENERAL MARKET	M	X09-3710-22	YES	NO
		AUSTRALIA	X	X09-3710-72	NO	YES

	MODE	SPEAKER OUTPUT FRONT (MAIN)
	SP.RELAY Ref.No.	K2
	USED HEADPHONES	NO
GE	PRESENCE OFF	YES
	F (FRONT) 4ch	YES
	S (SURROUND) 4ch	YES

SIGNAL LINE
GND LINE
+B LINE
−B LINE

IC7001
TA8409S
PST529D
PST529C
UPC7805AHF
UPC7815AHF
2SK163
2SK364
LA1265
LA3401
CX-7991
TA7805S
TA7815S
TA79015S

(Y,M,X type)

A-A5/A5L

Y05-2670-11

KENWOOD

<K,P,T,E type>
(X09-)(A/6)
CN6
2/4
C
3/4
(X09-)(A/6)
CN2
<Y,M,X type>

(X14-362X-XX)(A/3): JAPAN MADE
(X14-364X-XX)(A/3): SINGAPORE, FRANCE MADE

CN201

PRODUCT-P	MODEL NAME	DESTINATION COUNTRY	ABB	U
JAPAN MADE	A-A5	U.S.A CANADA	K P	X
		PX GENERAL MARKET	Y M	X
		AUSTRALIA	X	X
	A-A5L	EUROPE ENGLAND	T E	X
SINGAPORE MADE	A-A5	U.S.A CANADA	K P	X
		GENERAL MARKET	M	X
		AUSTRALIA	X	X
	A-A5L	EUROPE ENGLAND	T E	X
FRANCE MADE	A-A5L	EUROPE ENGLAND	T E	X

IC201 : CXP50116-397Q
or CXP50116-397QA
IC202 : CX-7991

Q201,202 : 2SC4038(Q,R)
Q203 : 2SA1561(Q,R)

D201,202 B30-1291-05
D212-227,231-234
: HSS104
or 1SS133
or 1N4148

A1 : W021046-05

ED201 : FIP11AM7R

GND LINE
+B LINE
-B LINE

<K,P,T,E type>
J3
PHONES
(X09-)(A/6)
CN5
2/4
B
3/4
(X09-)(A/6)
CN21
<Y,M,X type>

A-A5(K)(4/4)

PRODUCT-P.	MODEL NAME	DESTINATION COUNTRY	ABB	UNIT NAME	D213	D214	D215	Ⓐ
JAPAN MADE	A-A5	U.S.A CANADA	K P	X14-3620-12	NO	NO	NO	NO
		PX GENERAL MARKET	Y M	X14-3620-22	NO	YES	NO	YES
		AUSTRALIA	X	X14-3620-72	YES	YES	NO	NO
	A-A5L	EUROPE ENGLAND	T E	X14-3622-72	YES	YES	YES	NO
SINGAPORE MADE	A-A5	U.S.A CANADA	K P	X14-3640-11	NO	NO	NO	NO
		GENERAL MARKET	M	X14-3640-22	NO	YES	NO	YES
		AUSTRALIA	X	X14-3640-72	YES	YES	NO	NO
	A-A5L	EUROPE ENGLAND	T E	X14-3642-72	YES	YES	YES	NO
FRANCE MADE	A-A5L	EUROPE ENGLAND	T E	X14-3642-73	YES	YES	YES	NO

IC201 : CXP50116-397Q
or CXP50116-397QA
IC202 : CX-7991

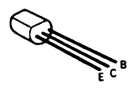
Q201,202 : 2SC4038(Q,R)
Q203 : 2SA1561(Q,R)

D201,202 : B30-1291-05
D212~227,231~234
: HSS104
or 1SS133
or 1N4148

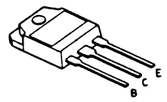
A1 : W02-1046-05

ED201 : FIP11AM7R

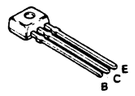
JA101
JC501
2SA1123
2SA1534A
2SA954
2SA992
2SB764
2SC1845
2SC1923
2SC2003
2SC2878
2SD1302



2SB1531
2SD2340



2SA1175
2SC2785



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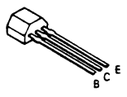

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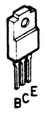

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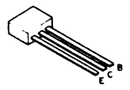

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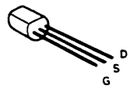

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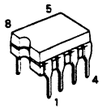

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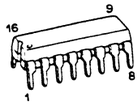
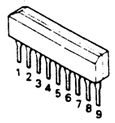


TA8409S



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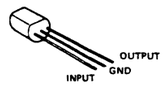

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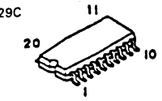
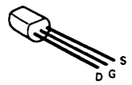
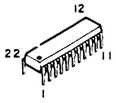


UPC7805AHF
UPC7815AHF

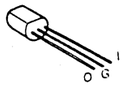
2SK163
2SK364



LA1265
LA3401

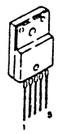


CX-7991



TA7805S
TA7815S

TA79015S



CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

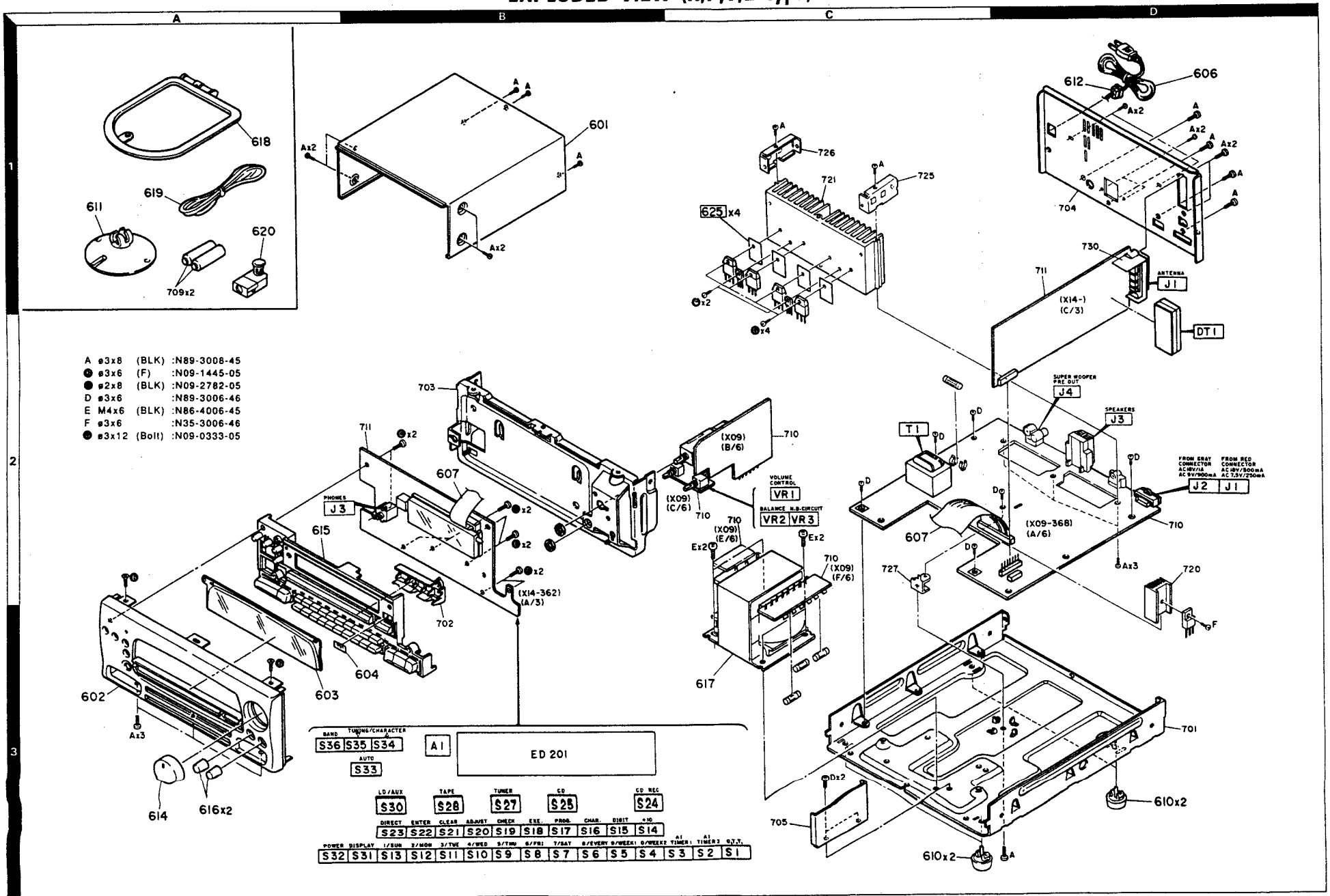
DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Y05-2670-11

A-A5/A5L

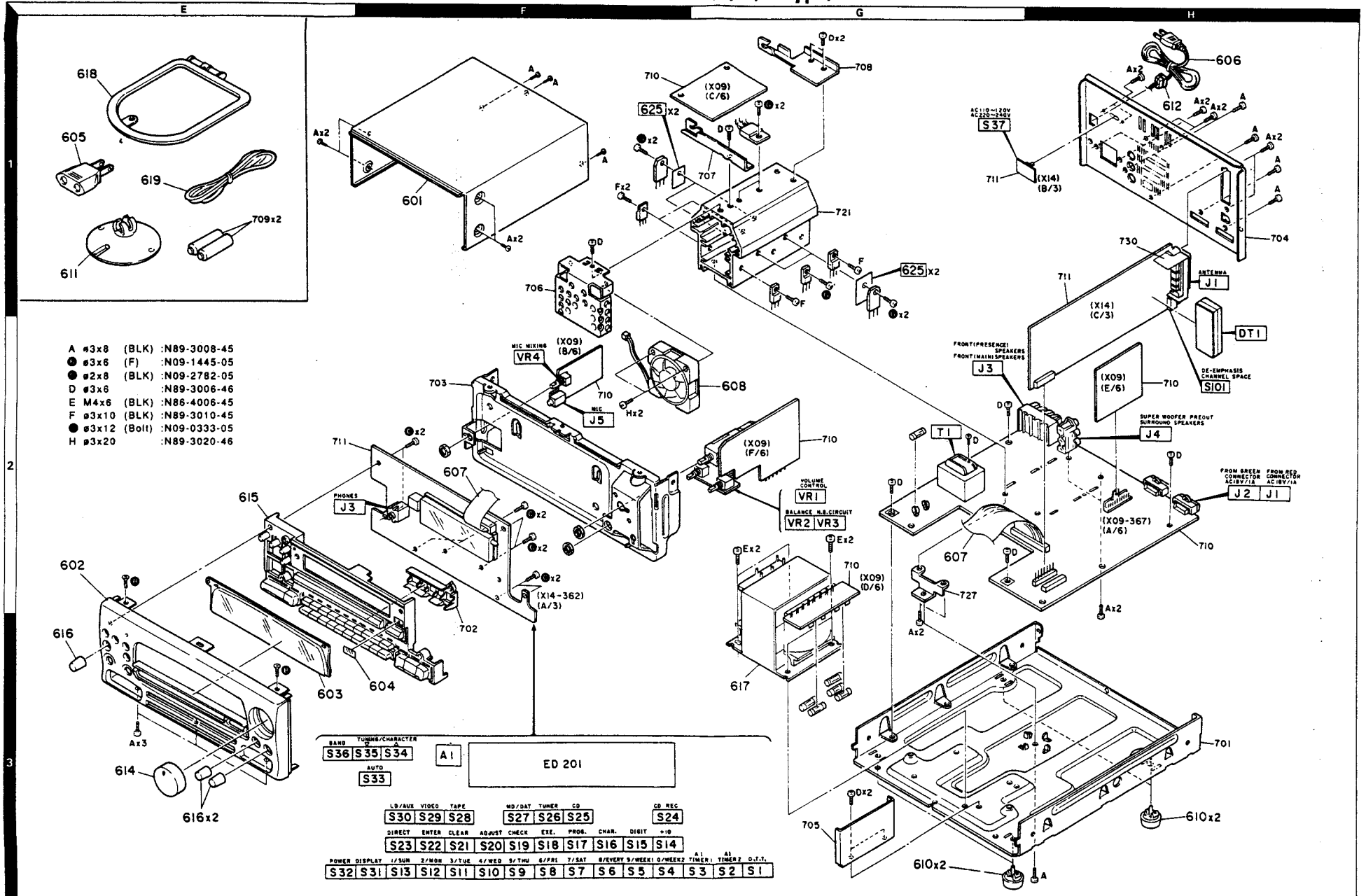
KENWOOD

EXPLODED VIEW (K,P,T,E type)



Refer to the schematic diagram for the values of registers and capacitors.

EXPLODED VIEW (Y,M,X type)



Refer to the schematic diagram for the values of registers and capacitors.

PARTS LIST

× New Parts
Parts without Parts No. are not supplied.
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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
A-A5/A5L (K,P,T,E type): JAPAN MADE						
601	1B	×	A01-2956-01	METALLIC CABINET		
602	3A	×	A60-0258-01	PANEL(A-A5)	KP	
602	3A	×	A60-0259-01	PANEL(A-A5L)	TE	
603	3A	×	B10-1928-03	FRONT GLASS		
604	3B	×	B11-0259-04	SMOKED FILTER		
-			B46-0092-13	WARRANTY CARD	K	
-			B46-0121-13	WARRANTY CARD	P	
-			B46-0122-23	WARRANTY CARD	E	
-			B46-0143-13	WARRANTY CARD	T	
-		×	B60-0930-00	INSTRUCTION MANUAL(ENGLISH)		
-		×	B60-0932-00	INSTRUCTION MANUAL(SPANISH)	E	
-		×	B60-0934-00	INSTRUCTION MANUAL(FRENCH)	PE	
-		×	B60-0935-00	INSTRUCTION MANUAL(GERMAN)	E	
-		×	B60-0936-00	INSTRUCTION MANUAL(DUTCH)	E	
-		×	B60-0937-00	INSTRUCTION MANUAL(ITALIAN)	E	
⚠ 606	1D		E30-2592-15	AC POWER CORD	E	
⚠ 606	1D		E30-2593-15	AC POWER CORD	T	
⚠ 606	1D		E30-2650-05	AC POWER CORD	KP	
607	2B,2C	×	E35-0495-05	WIRING HARNESS		
-			H10-5300-02	POLYSTYRENE FOAMED FIXTURE(L)		
-			H10-5301-02	POLYSTYRENE FOAMED FIXTURE(R)		
-			H10-5391-03	POLYSTYRENE FOAMED FIXTURE(F)		
-			H13-0039-04	CARTON BOARD		
-			H25-0632-24	PROTECTION BAG	KPE	
-			H25-0644-04	PROTECTION BAG (0632 PRINTED)	T	
-		×	H25-0681-04	PROTECTION BAG		
-		×	H50-0356-04	ITEM CARTON CASE(A-A5)	KP	
-		×	H50-0357-04	ITEM CARTON CASE(A-A5L)	TE	
610	3D		J02-0370-05	FOOT		
611	1A		J19-2815-04	ANTENNA HOLDER		
⚠ 612	1D		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
614	3A		K29-4358-04	KNOB ASSY(VOLUME CONTROL)		
615	2A	×	K29-4426-01	KNOB(POWER,DISPLAY etc.)		
616	3A	×	K29-4427-04	KNOB(BALANCE,N.B.CIRCUIT)		
⚠ 617	3C	×	L07-0546-15	POWER TRANSFORMER	KP	
⚠ 617	3C	×	L07-0549-15	POWER TRANSFORMER	E	
⚠ 617	3C	×	L07-0570-15	POWER TRANSFORMER	T	
A	1B		N89-3008-45	BINDING HEAD TAPTITE SCREW		
B	3A		N09-1445-05	SET SCREW (M3X8)		
C	2B		N09-2782-05	TAPTITE SCREW (2.6X8)		
D	3C		N89-3006-46	BINDING HEAD TAPTITE SCREW		
E	2C		N86-4006-45	BINDING HEAD TAPTITE SCREW		
F	2B		N35-3006-46	BINDING HEAD MACHINE SCREW		
G	2C		N09-0333-05	TAPPING SCREW (3X12)		
618	1A		T90-0173-05	LOOP ANTENNA(AM)		
619	1A		T90-0176-05	T TYPE ANTENNA(FM)		
620	1A		T90-0185-05	ANTENNA ADAPTOR	TE	

L:Scandinavia K:USA P:Canada
Y:PX(Far East, Hawaii) T:England E:Europe
Y:AAFES(Europe) X:Australia M:Other Areas

S: SINGAPORE MADE
F: FRANCE MADE

⚠ indicates safety critical components.

PARTS LIST

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
A-A5/A5L (K,P,T,E type): SINGAPORE MADE						
601	1B	×	A01-2966-01	METALLIC CABINET		S
602	3A	×	A60-0258-01	PANEL(A-A5)	KP	
602	3A	×	A60-0259-01	PANEL(A-A5L)	TE	
603	3A	×	B10-1928-03	FRONT GLASS		
604	3B	×	B11-0259-04	SMOKED FILTER		
-			B46-0092-13	WARRANTY CARD	K	
-			B46-0121-13	WARRANTY CARD	P	
-			B46-0122-23	WARRANTY CARD	E	
-			B46-0143-13	WARRANTY CARD	T	
-		×	B60-0930-00	INSTRUCTION MANUAL(ENGLISH)		
-		×	B60-0932-00	INSTRUCTION MANUAL(SPANISH)	E	
-		×	B60-0934-00	INSTRUCTION MANUAL(FRENCH)	PE	
-		×	B60-0935-00	INSTRUCTION MANUAL(GERMAN)	E	
-		×	B60-0936-00	INSTRUCTION MANUAL(DUTCH)	E	
-		×	B60-0937-00	INSTRUCTION MANUAL(ITALIAN)	E	
⚠ 606	1D		E30-2592-15	AC POWER CORD	E	
⚠ 606	1D		E30-2593-15	AC POWER CORD	T	
⚠ 606	1D		E30-2650-05	AC POWER CORD	KP	
607	2B,2C	×	E35-0495-05	WIRING HARNESS		
-		×	H10-5324-02	POLYSTYRENE FOAMED FIXTURE(L)		S
-		×	H10-5325-02	POLYSTYRENE FOAMED FIXTURE(R)		S
-		×	H10-5390-03	POLYSTYRENE FOAMED FIXTURE(F)		S
-			H13-0086-04	CARTON BOARD		S
-			H25-0632-24	PROTECTION BAG	KPE	
-			H25-0644-04	PROTECTION BAG (0632 PRINTED)	T	
-		×	H25-0681-04	PROTECTION BAG		
-		×	H50-0418-04	ITEM CARTON CASE(A-A5)	KP	S
-		×	H50-0420-04	ITEM CARTON CASE(A-A5L)	TE	S
610	3D		J02-0370-05	FOOT		
⚠ 611	1A		J19-2815-04	ANTENNA HOLDER		
612	1D		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
614	3A		K29-4358-04	KNOB ASSY(VOLUME CONTROL)		
615	2A	×	K29-4426-01	KNOB(POWER,DISPLAY etc.)		
616	3A	×	K29-4427-04	KNOB(BALANCE,N.B.CIRCUIT)		
⚠ 617	3C	×	L07-0546-15	POWER TRANSFORMER	KP	
⚠ 617	3C	×	L07-0549-15	POWER TRANSFORMER	E	
⚠ 617	3C	×	L07-0570-15	POWER TRANSFORMER	T	
A	1B		N89-3008-45	BINDING HEAD TAPTITE SCREW		
B	3A		N09-1445-05	SET SCREW (M3X8)		
C	2B		N09-2782-05	TAPTITE SCREW (2.6X8)		
D	3C		N89-3006-46	BINDING HEAD TAPTITE SCREW		
E	2C		N86-4006-45	BINDING HEAD TAPTITE SCREW		
F	2B		N35-3006-46	BINDING HEAD MACHINE SCREW		
G	2C		N09-0333-05	TAPPING SCREW (3X12)		
618	1A		T90-0174-05	LOOP ANTENNA(AM)		S
619	1A		T90-0175-05	T TYPE ANTENNA(FM)		
620	1A		T90-0185-05	ANTENNA ADAPTOR	TE	

L:Scandinavia K:USA P:Canada
Y:PX(Far East, Hawaii) T:England E:Europe
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A-A5/A5L

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A-A5L (T,E type): FRANCE MADE						
601	1B	×	A01-2956-01	METALLIC CABINET		
602	3A	×	A60-0259-01	PANEL(A-A5L)		
603	3A	×	B10-1928-03	FRONT GLASS		
604	3B	×	B11-0259-04	SMOKED FILTER		
-			B46-0122-23	WARRANTY CARD	E	
-			B46-0143-13	WARRANTY CARD	T	
-		×	B60-0930-00	INSTRUCTION MANUAL(ENGLISH)		
-		×	B60-0932-00	INSTRUCTION MANUAL(SPANISH)	E	
-		×	B60-0934-00	INSTRUCTION MANUAL(FRENCH)	E	
-		×	B60-0935-00	INSTRUCTION MANUAL(GERMAN)	E	
-		×	B60-0936-00	INSTRUCTION MANUAL(DUTCH)	E	
-		×	B60-0937-00	INSTRUCTION MANUAL(ITALIAN)	E	
⚠ 606	1D		E30-2592-15	AC POWER CORD	E	
⚠ 606	1D		E30-2593-15	AC POWER CORD	T	
607	2B,2C	×	E35-0495-05	WIRING HARNESS		
-		×	H10-5326-02	POLYSTYRENE FOAMED FIXTURE(L)		F
-		×	H10-5327-02	POLYSTYRENE FOAMED FIXTURE(R)		F
-		×	H10-5389-03	POLYSTYRENE FOAMED FIXTURE(F)		F
-			H13-0039-04	CARTON BOARD		
-			H25-0632-24	PROTECTION BAG	E	
-			H25-0644-04	PROTECTION BAG (0632 PRINTED)	T	
-		×	H25-0681-04	PROTECTION BAG		
-		×	H50-0421-04	ITEM CARTON CASE(A-A5L)		F
610	3D		J02-0370-05	FOOT		
611	1A		J19-2815-04	ANTENNA HOLDER		
⚠ 612	1D		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
614	3A		K29-4358-04	KNOB ASSY(VOLUME CONTROL)		
615	2A	×	K29-4426-01	KNOB(POWER,DISPLAY etc.)		
616	3A	×	K29-4427-04	KNOB(BALANCE,N.B.CIRCUIT)		
⚠ 617	3C	×	L07-0549-15	POWER TRANSFORMER	E	
⚠ 617	3C	×	L07-0570-15	POWER TRANSFORMER	T	
A	1B		N89-3008-45	BINDING HEAD TAPTITE SCREW		
B	3A		N09-1445-05	SET SCREW (M3X8)		
C	2B		N09-2782-05	TAPTITE SCREW (2.6X8)		
D	3C		N89-3006-46	BINDING HEAD TAPTITE SCREW		
E	2C		N86-4006-45	BINDING HEAD TAPTITE SCREW		
F	2B		N35-3006-46	BINDING HEAD MACHINE SCREW		
G	2C		N09-0333-05	TAPPING SCREW (3X12)		
618	1A		T90-0153-05	LOOP ANTENNA(AM)		S
619	1A		T90-0176-05	T TYPE ANTENNA(FM)		
620	1A		T90-0185-05	ANTENNA ADAPTOR		
A-A5 (Y,M,X type): JAPAN MADE						
601	1F	×	A01-2956-01	METALLIC CABINET		
602	2E	×	A60-0257-01	PANEL(A-A5)		
603	3E	×	B10-1928-03	FRONT GLASS		
604	3F	×	B11-0259-04	SMOKED FILTER		
-			B46-0094-03	WARRANTY CARD	Y	

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-			B46-0095-03	WARRANTY CARD	Y	
-			B46-0096-33	WARRANTY CARD	X	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-		*	B60-0930-00	INSTRUCTION MANUAL(ENGLISH)		
-		*	B60-0931-00	INSTRUCTION MANUAL(CHINESE)	M	
-		*	B60-0932-00	INSTRUCTION MANUAL(SPANISH)	M	
-		*	B60-0987-00	INSTRUCTION MANUAL(ARABIC)	M	
△ 605	1E		E03-0115-05	AC PLUG ADAPTER	M	
△ 606	1H		E30-2592-15	AC POWER CORD	M	
△ 606	1H		E30-2594-15	AC POWER CORD	X	
△ 606	1H		E30-2605-05	AC POWER CORD	Y	
607	2F,2G	*	E35-0404-05	WIRING HARNESS		
608	2G	*	F09-0082-05	FAN		
-			H10-5300-02	POLYSTYRENE FOAMED FIXTURE(L)		
-			H10-5301-02	POLYSTYRENE FOAMED FIXTURE(R)		
-			H10-5391-03	POLYSTYRENE FOAMED FIXTURE(F)		
-			H13-0039-04	CARTON BOARD		
-			H25-0632-24	PROTECTION BAG		
-		*	H25-0681-04	PROTECTION BAG		
-		*	H50-0356-04	ITEM CARTON CASE(A-A5)		
610	3H		J02-0370-05	FOOT		
611	1E		J19-2815-04	ANTENNA HOLDER		
△ 612	1H		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
614	3E		K29-4358-04	KNOB ASSY(VOLUME CONTROL)		
615	2E	*	K29-4426-01	KNOB(POWER,DISPLAY etc.)		
616	3E	*	K29-4427-04	KNOB(BALANCE,N.B. CIRCUIT)		
△ 617	3G	*	L07-0547-15	POWER TRANSFORMER	YM	
△ 617	3G	*	L07-0548-15	POWER TRANSFORMER	X	
A	1F		N89-3008-45	BINDING HEAD TAPTITE SCREW		
B	3E		N09-1445-05	SET SCREW (M3X8)		
C	2F		N09-2782-05	TAPTITE SCREW (2.6X8)		
D	2F		N89-3006-46	BINDING HEAD TAPTITE SCREW		
E	2G		N86-4006-45	BINDING HEAD TAPTITE SCREW		
F	1G		N89-3010-45	BINDING HEAD TAPTITE SCREW		
G	1G		N09-0333-05	TAPPING SCREW (3X12)		
H	2F		N89-3020-46	BINDING HEAD TAPTITE SCREW		
618	1E		T90-0173-05	LOOP ANTENNA(AM)		
619	1E		T90-0176-05	T TYPE ANTENNA(FM)		
A-A5 (M,X type): SINGAPORE MADE						
601	1F	*	A01-2966-01	METALLIC CABINET		S
602	2E	*	A60-0257-01	PANEL(A-A5)		
603	3E	*	B10-1928-03	FRONT GLASS		
604	3F	*	B11-0259-04	SMOKED FILTER		
-			B46-0096-33	WARRANTY CARD	X	
-		*	B60-0930-00	INSTRUCTION MANUAL(ENGLISH)		
-		*	B60-0931-00	INSTRUCTION MANUAL(CHINESE)	M	
-		*	B60-0932-00	INSTRUCTION MANUAL(SPANISH)	M	
-		*	B60-0987-00	INSTRUCTION MANUAL(ARABIC)	M	
△ 605	1E		E03-0115-05	AC PLUG ADAPTER	M	

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A-A5/A5L

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Destination 仕向	Remarks 備考
△ 606	1F		E30-2592-15	AC POWER CORD	M	
△ 606	1F		E30-2594-15	AC POWER CORD	X	
607	2F,2G	*	E35-0404-05	WIRING HARNESS		
608	2G	*	F09-0082-05	FAN		
-		*	H10-5324-02	POLYSTYRENE FOAMED FIXTURE(L)		S
-		*	H10-5325-02	POLYSTYRENE FOAMED FIXTURE(R)		S
-		*	H10-5390-03	POLYSTYRENE FOAMED FIXTURE(F)		S
-			H13-0086-04	CARTON BOARD		S
-			H25-0632-24	PROTECTION BAG		
-		*	H25-0681-04	PROTECTION BAG		
-		*	H50-0418-04	ITEM CARTON CASE(A-A5)	X	S
-		*	H50-0419-04	ITEM CARTON CASE(A-A5)	M	S
610	3H		J02-0370-05	FOOT		
611	1E		J19-2815-04	ANTENNA HOLDER		
△ 612	1H		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
614	3E		K29-4358-04	KNOB ASSY(VOLUME CONTROL)		
615	2E	*	K29-4426-01	KNOB(POWER,DISPLAY etc.)		
616	3E	*	K29-4427-04	KNOB(BALANCE,N.B. CIRCUIT)		
△ 617	3G	*	L07-0547-15	POWER TRANSFORMER	M	
△ 617	3G	*	L07-0548-15	POWER TRANSFORMER	X	
A	1E		N89-3008-45	BINDING HEAD TAPTITE SCREW		
B	3F		N09-1445-05	SET SCREW (M3X8)		
C	2F		N09-2782-05	TAPTITE SCREW (2.6X8)		
D	2F		N89-3006-46	BINDING HEAD TAPTITE SCREW		
E	2G		N86-4006-45	BINDING HEAD TAPTITE SCREW		
F	1G		N89-3010-45	BINDING HEAD TAPTITE SCREW		
G	1G		N09-0333-05	TAPPING SCREW (3X12)		
H	2F		N89-3020-46	BINDING HEAD TAPTITE SCREW		
618	1E		T90-0174-05	LOOP ANTENNA(AM)		S
619	1E		T90-0175-05	T TYPE ANTENNA(FM)		
AUDIO UNIT (K,P,T,E type) X09-368: JAPAN MADE X09-372: SINGAPORE, FRANCE MADE						
C1 ,2			C91-0749-05	CERAMIC	220PF	K
C3 ,4			CE04KW1V100M	ELECTRO	10UF	35WV
C5 ,6			CC45FSL1H560J	CERAMIC	56PF	J
C7 ,8			C90-3253-05	ELECTRO	1UF	50WV
C9 ,10			CK45FB1H561K	CERAMIC	560PF	K
C11 ,12			CE04KW1H010M	ELECTRO	1.0UF	50WV
C13 ,14			C90-3253-05	ELECTRO	1UF	50WV
C15 ,16			C90-3254-05	ELECTRO	2.2UF	50WV
C17 ,18			CC45FSL1H220J	CERAMIC	22PF	J
C19 ,20			CC45FSL1H221J	CERAMIC	220PF	J
C21 ,22			CC45FSL1H100D	CERAMIC	10PF	D
C23 ,24			CC45FSL1H470J	CERAMIC	47PF	J
C25 ,26			CC45FSL1H390J	CERAMIC	39PF	J
C27 ,28			CC45FSL1H221J	CERAMIC	220PF	J
C29 ,30			CF92FV1H103J	MF	0.010UF	J
C31 ,32			CF92FV1H222J	MF	2200PF	J
C33 -36			CF92FV1H104J	MF	0.10UF	J
C37 ,38			CF92FV1H472J	MF	4700PF	J
C39 ,40			CE04KW1C101M	ELECTRO	100UF	16WV
C41 -44			C91-0749-05	CERAMIC	220PF	K

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C45			C90-3258-05	ELECTRO	10UF	50WV		
C46			CE04KW1A101M	ELECTRO	100UF	10WV		
C47			CF92FV1H472J	MF	4700PF	J		
C48			CE04HW1E330M	NP-ELEC	33UF	25WV		
C49			CF92FV1H104J	MF	0.10UF	J		
C50			CE04KW1C101M	ELECTRO	100UF	16WV		
C51			CF92FV1H104J	MF	0.10UF	J		
C53 ,54			CE04KW1H010M	ELECTRO	1.0UF	50WV		
C55			CE04KW1H470M	ELECTRO	47UF	50WV		
C56			C90-1826-05	BACKUP	0.047F	5.5WV		
C57			CF92FV1H104J	MF	0.10UF	J		
C58 ,59			CE04KW1H220M	ELECTRO	22UF	50WV		
C60			CE04KW1E471M	ELECTRO	470UF	25WV		
C61			CE04KW1V470M	ELECTRO	47UF	35WV		
C62			CE04KW1E101M	ELECTRO	100UF	25WV		
C63			CF92FV1H104J	MF	0.10UF	J		
C64			CE04KW1C101M	ELECTRO	100UF	16WV		
C65			CF92FV1H104J	MF	0.10UF	J		
C66 ,67			CF92FV1H103J	MF	0.010UF	J		
C68 ,69			CE04KW1H221M	ELECTRO	220UF	50WV		
C70 ,71		*	C90-1966-05	ELECTRO	4700UF	42WV		
C73 ,74			CF92FV1H154J	MF	0.15UF	J		
C75 ,76			CE04HW1H010M	NP-ELEC	1.0UF	50WV		
C77 ,78			CF92FV1H105J	MF	1.0UF	J		
C83 ,84			CK45FB1H102K	CERAMIC	1000PF	K		
C87 ,88		*	C90-3247-05	ELECTRO	47UF	35WV		
C89			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C91			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C92			CK45FB1H102K	CERAMIC	1000PF	K		
C93			CE04KW1H010M	ELECTRO	1.0UF	50WV		
C94 -96			CK45FB1H102K	CERAMIC	1000PF	K		
C97			CE04KW1C330M	ELECTRO	33UF	16WV		
⚠ C98			C91-1439-05	FILM	0.01UF	250VAC		
J1	2D		E08-1508-05	RECTANGULAR RECEPTACLE(RED)				
J2	2D		E08-0411-05	RECTANGULAR RECEPTACLE(GRAY)				
J3	2D		E20-0475-05	LOCK TERMINAL BOARD(SPEAKERS)				
J4	2D		E13-0138-05	PHONO JACK(SUPER WOOFER)				
625	1C		F20-1284-05	INSULATING BOARD				
⚠ F1			F05-1222-05	FUSE (SEMKO)	(250V T1.25A)		TE	
⚠ F1			F06-2525-05	FUSE (UL)	(250V 2.5A)		KP	
⚠ F2			F04-2025-05	FUSE (UL)	(250V 2A)		KP	
⚠ F2			F06-2021-05	FUSE (SEMKO)	(250V T2A)		TE	
⚠ F3			F06-2021-05	FUSE (SEMKO)	(250V T2A)		TE	
⚠ F3			F06-2525-05	FUSE (UL)	(250V 2.5A)		KP	
⚠ F4			F04-2025-05	FUSE (UL)	(250V 2A)		KP	
⚠ F4			F06-2021-05	FUSE (SEMKO)	(250V T2A)		TE	
CN7 -14			J13-0075-05	FUSE CLIP				
L1 ,2			L39-0085-05	PHASE COMPENSATION COIL				
⚠ T1	2C		L07-0332-05	POWER TRANSFORMER			KP	
⚠ T1	2C		L07-0333-05	POWER TRANSFORMER			T	
⚠ T1	2C		L07-0334-05	POWER TRANSFORMER			E	
CP1 ,2			R90-0826-05	MULTI-COMP	0.22X2	J 5W		
R39 ,40			RD14NB2E4R7J	RD	4.7	J 1/4W		

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R49 ,50			RD14NB2E4R7J	RD	4.7	J 1/4W		
R57 ,58			RS14KB3D100J	FL-PROOF RS	10	J 2W		
R61 ,62			RD14NB2E100J	RD	10	J 1/4W		
R86 ,87			RD14NB2E101J	RD	100	J 1/4W		
R94			RS14KB3D391J	FL-PROOF RS	390	J 2W		
R95 ,96			RD14NB2E101J	RD	100	J 1/4W		
R116,117			RS14KB3D391J	FL-PROOF RS	390	J 2W		
R119,120			RD14NB2E470J	RD	47	J 1/4W		
⚠ R139			RS14KB3D100J	FL-PROOF RS	10	J 2W		
⚠ R140			R92-0173-05	RC	2.2M	M 1/2W	KP	
R142			RS14KB3D121J	FL-PROOF RS	120	J 2W		
R143			RS14KB3D151J	FL-PROOF RS	150	J 2W		
R147			RS14KB3D681J	FL-PROOF RS	680	J 2W		
VR1	2C	*	R29-5073-05	POTENTIOMETER(VOLUME CONTROL)				
VR2	2C	*	R11-9023-05	POTENTIOMETER(BALANCE)				
VR3	2C		R05-5046-05	POTENTIOMETER(N.B.CIRCUIT)				
⚠ K1			S76-0009-05	MAGNETIC RELAY(POWER)				
K2			S76-0005-05	MAGNETIC RELAY(FRONT SPEAKERS)				
D1 -9			HSS104	DIODE				
D1 -9			1SS133	DIODE				
D10			HZS4.7N(B2)	ZENER DIODE				
D10			RD4.7ES(B2)	ZENER DIODE				
D11			HSS104	DIODE				
D11			1SS133	DIODE				
D12			HZS6.8N(B2)	ZENER DIODE				
D12			RD6.8ES(B2)	ZENER DIODE				
D13			HSS104	DIODE				
D13			1SS133	DIODE				
⚠ D14 ,15			S5688B	DIODE				
D16			HZS27N(B2)	ZENER DIODE				
D16			RD27ES(B2)	ZENER DIODE				
⚠ D17 ,18			S5688B	DIODE				
D19			HSS104	DIODE				
D19			1SS133	DIODE				
⚠ D20			D3SBA20F03	DIODE				
D21			HZS4.7N(B2)	ZENER DIODE				
D21			RD4.7ES(B2)	ZENER DIODE				
D22 -31			HSS104	DIODE				
D22 -31			1SS133	DIODE				
D34			HZS4.7N(B2)	ZENER DIODE				
D34			RD4.7ES(B2)	ZENER DIODE				
D35 ,36			HSS104	DIODE				
D35 ,36			1SS133	DIODE				
D37			HZS4.7N(B2)	ZENER DIODE				
D37			RD4.7ES(B2)	ZENER DIODE				
D38 ,39			HSS104	DIODE				
D38 ,39			1SS133	DIODE				
D40			HZS5.6N(B2)	ZENER DIODE				
D40			RD5.6ES(B2)	ZENER DIODE				
D41 -45			HSS104	DIODE				
D41 -45			1SS133	DIODE				
IC1 ,2			NJM4565D-D	IC(OP AMP X2)				
IC3			TA8409S	IC(MOTOR CONTROL)				

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IC5			TA7815S	IC(VOLTAGE REGULATOR/ +15V)				
IC5			UPC7815AHF	IC(VOLTAGE REGULATOR/+15V)				
IC6			TA79015S	IC(VOLTAGE REGULATOR/ -15V)				
IC7			PST529D	IC(SYSTEM RESET)				
IC8			TA7805S	IC(VOLTAGE REGULATOR/ +5V)				
IC8			UPC7805AHF	IC(VOLTAGE REGULATOR/ +5V)				
Q1 -4			2SC1740S(Q,R)	TRANSISTOR				
Q1 -4			2SC2458(Y,GR)	TRANSISTOR				
Q1 -4			2SC2785(F,E)	TRANSISTOR				
Q1 -4			2SC3311A(Q,R)	TRANSISTOR				
Q5 -8			2SA992(E,F)	TRANSISTOR				
Q9 -12			2SC1845(F,E)	TRANSISTOR				
Q13 ,14			2SA992(E,F)	TRANSISTOR				
Q15 ,16			2SC4137(V,W)	TRANSISTOR				
Q17 ,18			2SC1845(F,E)	TRANSISTOR				
△ Q19 ,20			2SD2340	TRANSISTOR				
△ Q21 ,22			2SB1531	TRANSISTOR				
Q23			2SA1048(Y,GR)	TRANSISTOR				
Q23			2SA1175(F,E)	TRANSISTOR				
Q23			2SA1309A(Q,R)	TRANSISTOR				
Q23			2SA933S(Q,R)	TRANSISTOR				
Q24 ,25			2SC2003(L,K)	TRANSISTOR				
Q26			2SC2878(B)	TRANSISTOR				
Q27			2SA1048(Y,GR)	TRANSISTOR				
Q27			2SA1175(F,E)	TRANSISTOR				
Q27			2SA1309A(Q,R)	TRANSISTOR				
Q27			2SA933S(Q,R)	TRANSISTOR				
Q31			2SC2003(L,K)	TRANSISTOR				
△ Q32			2SB764	TRANSISTOR				
Q33			2SC2003(L,K)	TRANSISTOR				
Q34			2SA992(E,F)	TRANSISTOR				
Q35 ,36			2SC1845(F,E)	TRANSISTOR				
Q37			2SA1048(Y,GR)	TRANSISTOR				
Q37			2SA1175(F,E)	TRANSISTOR				
Q37			2SA1309A(Q,R)	TRANSISTOR				
Q37			2SA933S(Q,R)	TRANSISTOR				
Q38			2SC1740S(Q,R)	TRANSISTOR				
Q38			2SC2458(Y,GR)	TRANSISTOR				
Q38			2SC2785(F,E)	TRANSISTOR				
Q38			2SC3311A(Q,R)	TRANSISTOR				
AUDIO UNIT (Y,M,X type) X09-367 :JAPAN MADE X09-371: SINGAPORE MADE								
C1 ,2			CK45FB1H471K	CERAMIC	470PF	K		
C5 ,6			CC45FSL1H151J	CERAMIC	150PF	J		
C7 ,8			CF92FV1H222J	MF	2200PF	J		
C9 ,10			C90-3225-05	ELECTRO	10UF	16WV		
C11 ,12			CF92FV1H154J	MF	0.15UF	J		
C13 ,14			CE04KW1H2R2M	ELECTRO	2.2UF	50WV		
C15 ,16			C90-3225-05	ELECTRO	10UF	16WV		
C21 ,22			CE04KW1H010M	ELECTRO	1.0UF	50WV		
C23 -26			CC45FSL1H121J	CERAMIC	120PF	J		
C27 ,28			CC45FSL1H100D	CERAMIC	10PF	D		
C29 ,30			CC45FSL1H470J	CERAMIC	47PF	J		
C31 ,32			CC45FSL1H221J	CERAMIC	220PF	J		
C33 ,34			C90-1845-05	ELECTRO	100UF	6.3WV		
C35 ,36			CE04KW1V100M	ELECTRO	10UF	35WV		

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C37 ,38			CC45FSL1H390J	CERAMIC	39PF	J		
C41 ,42			CE04KW1C220M	ELECTRO	22UF	16WV		
C43 -46			CF92FV1H473J	MF	0.047UF	J		
C49 ,50			CF92FV1H103J	MF	0.010UF	J		
C51 ,52			CF92FV1H823J	MF	0.082UF	J		
C53 ,54			CE04KW1C100M	ELECTRO	10UF	16WV		
C71			CE04KW1H470M	ELECTRO	47UF	50WV		
C72			CE04KW1H221M	ELECTRO	220UF	50WV		
C81			CF92FV1H102J	MF	1000PF	J		
C82			CE04KW1C100M	ELECTRO	10UF	16WV		
C83			CC45FSL1H221J	CERAMIC	220PF	J		
C84			CF92FV1H473J	MF	0.047UF	J		
C86			CF92FV1H472J	MF	4700PF	J		
C90 ,91		×	C90-1966-05	ELECTRO	4700UF	42WV		
C93 ,94			CF92FV1H104J	MF	0.10UF	J		
C95 -97			CE04KW1C101M	ELECTRO	100UF	16WV		
C98 ,99			CF92FV1H104J	MF	0.10UF	J		
C107			CE04KW1H4R7M	ELECTRO	4.7UF	50WV		
C108			CE04KW1H010M	ELECTRO	1.0UF	50WV		
C109			CE04KW1A101M	ELECTRO	100UF	10WV		
C110			CE04KW1C470M	ELECTRO	47UF	16WV		
C111			CE04KW1C101M	ELECTRO	100UF	16WV		
C112			CE04KW1H2R2M	ELECTRO	2.2UF	50WV		
C113,114			CC45FSL1H101J	CERAMIC	100PF	J		
C115			C90-3253-05	ELECTRO	1UF	50WV		
C116			CE04KW1H010M	ELECTRO	1.0UF	50WV		
△ C117			C91-1439-05	FILM	0.01UF	250VAC		
C118,119			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C120			CE04KW1C101M	ELECTRO	100UF	16WV		
C121,122			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C133			CE04KW1V330M	ELECTRO	33UF	35WV		
C138,139			CF92FV1H104J	MF	0.10UF	J		
C140,141			C91-0769-05	CERAMIC	0.01UF	K		
C142			CF92FV1H224J	MF	0.22UF	J		
C230			CE04KW1E101M	ELECTRO	100UF	25WV		
C231,232			CE04KW1V470M	ELECTRO	47UF	35WV		
C233,234			CE04KW1V100M	ELECTRO	10UF	35WV		
C235			CE04KW1E471M	ELECTRO	470UF	25WV		
C236			CE04KW1H010M	ELECTRO	1.0UF	50WV		
C237			C90-1827-05	BACKUP	0.047F	5.5WV		
C238		×	C90-3239-05	ELECTRO	100UF	25WV		
C243,244			C90-3253-05	ELECTRO	1UF	50WV		
C245,246		×	C90-3237-05	ELECTRO	47UF	25WV		
J1	2H		E08-1508-05	RECTANGULAR RECEPTACLE(RED)				
J2	2H		E58-0001-05	RECTANGULAR RECEPTACLE(GREEN)				
J3	2G		E20-0459-05	LOCK TERMINAL BOARD(F.SP.)				
J4	2H		E63-0018-05	PHONO JACK(S.WOOFER,SURR.SP.)				
J5	2F		E11-0220-05	MINIATURE PHONE JACK(MIC)				
625	1F,1G		F20-1284-05	INSULATING BOARD				
△ F1			F05-4025-05	FUSE (SEMKO)	(250V T4A)		YM	
△ F2			F06-2021-05	FUSE (SEMKO)	(250V T2A)			
△ F3 ,4			F05-4025-05	FUSE (SEMKO)	(250V T4A)			
△ F5 -7			F06-2021-05	FUSE (SEMKO)	(250V T2A)			
CN6 ,7			J13-0075-05	FUSE CLIP				

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CN8 ,9			J13-0075-05	FUSE CLIP	YM	
CN10-19			J13-0075-05	FUSE CLIP		
L1 ,2			L39-0085-05	PHASE COMPENSATION COIL		
⚠ T1	2G		L07-0333-05	POWER TRANSFORMER	X	
⚠ T1	2G		L07-0335-05	POWER TRANSFORMER	YM	
CP1 ,2			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
R37 ,38			RN14BK2C1471F	RN 1.47K F 1/6W		
R39 ,40			RD14NB2E151J	RD 150 J 1/4W		
R41 ,42			RD14NB2E222J	RD 2.2K J 1/4W		
R43 ,44			RD14NB2E181J	RD 180 J 1/4W		
R45 ,46			RD14NB2E151J	RD 150 J 1/4W		
R55 ,56			RN14BK2C1003F	RN 100K F 1/6W		
R57 -60			RD14NB2E4R7J	RD 4.7 J 1/4W		
R61 ,62			RS14KB3D100J	FL-PROOF RS 10 J 2W		
R63 ,64			RD14NB2E4R7J	RD 4.7 J 1/4W		
R65 ,66			RS14KB3D561J	FL-PROOF RS 560 J 2W		
R85			RD14NB2E221J	RD 220 J 1/4W		
R86			RD14NB2E101J	RD 100 J 1/4W		
R150			RS14KB3D271J	FL-PROOF RS 270 J 2W		
R187,188			RD14NB2E221J	RD 220 J 1/4W		
R202			RS14KB3D121J	FL-PROOF RS 120 J 2W		
R204			RS14KB3D151J	FL-PROOF RS 150 J 2W		
R225,226			RD14NB2E100J	RD 10 J 1/4W		
⚠ R229			R92-0513-05	FUSE RESIST 10 G 1/4W		
R231			RS14KB3D101J	FL-PROOF RS 100 J 2W		
R236			RS14KB3D681J	FL-PROOF RS 680 J 2W		
VR1	2G	*	R29-9028-05	POTENTIOMETER(VOLUME CONTROL)		
VR2	2G		R10-5043-05	POTENTIOMETER(BALANCE)		
VR3	2G	*	R11-9022-05	POTENTIOMETER(N.B. CIRCUIT)		
VR4	2F	*	R10-5060-05	POTENTIOMETER(MIC MIXING)		
⚠ K1			S76-0002-05	MAGNETIC RELAY(POWER)		
K2			S76-0005-05	MAGNETIC RELAY(FRONT SP.)		
S1		*	S79-0006-05	SWITCH ASSY (80°C CUT FAN)		
S2		*	S79-0007-05	SWITCH ASSY(105°C CUT PROTECT)		
D1 -5			HSS104A	DIODE		
D1 -5			1SS131	DIODE		
D6			HZS4.7N(B)	ZENER DIODE		
D6			RD4.7ES(B)	ZENER DIODE		
D7			HSS104A	DIODE		
D7			1SS131	DIODE		
⚠ D10			D5SBA20F03	DIODE		
⚠ D10			RBV-602LFA	DIODE		
D11			HZS4.7N(B)	ZENER DIODE		
D11			RD4.7ES(B)	ZENER DIODE		
D12			HSS104A	DIODE		
D12			1SS131	DIODE		
D13 ,14			HZS5.6N(B2)	ZENER DIODE		
D13 ,14			RD5.6ES(B2)	ZENER DIODE		
D15 -17			HSS104A	DIODE		
D15 -17			1SS131	DIODE		
D18			HZS4.7N(B)	ZENER DIODE		
D18			RD4.7ES(B)	ZENER DIODE		
D19			HZS16N(B2)	ZENER DIODE		
D19			RD16ES(B2)	ZENER DIODE		

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D20			S5688B	DIODE		
D20			1SR139-100	DIODE		
D22 ,23			HSS104A	DIODE		
D22 ,23			1SS131	DIODE		
D24			HZS6.8N(B2)	ZENER DIODE		
D24			RD6.8ES(B2)	ZENER DIODE		
D25			HZS6.2N(B2)	ZENER DIODE		
D25			RD6.2ES(B2)	ZENER DIODE		
D26			HZS11N(B2)	ZENER DIODE		
D26			RD11ES(B2)	ZENER DIODE		
D27			HZS16N(B2)	ZENER DIODE		
D27			RD16ES(B2)	ZENER DIODE		
⚠ D29 -32			S5688B	DIODE		
⚠ D29 -32			1SR139-100	DIODE		
D33 -44			HSS104A	DIODE		
D33 -44			1SS131	DIODE		
D47 -58			HSS104A	DIODE		
D47 -58			1SS131	DIODE		
IC1			NJM4565D-D	IC(OP AMP X2)		
IC2			TA8409S	IC(MOTOR CONTROL)		
IC4			NJM4565D-D	IC(OP AMP X2)		
IC6			PST529C	IC(SYSTEM RESET)		
⚠ IC7			TA7815S	IC(VOLTAGE REGULATOR/ +15V)		
⚠ IC7			UPC7815AHF	IC(VOLTAGE REGULATOR/+15V)		
Q1 ,2			2SC1845(F,E)	TRANSISTOR		
Q5 -8			2SA992(F,E)	TRANSISTOR		
Q9 -12			2SC1845(F,E)	TRANSISTOR		
Q13 ,14			2SA992(F,E)	TRANSISTOR		
Q15 ,16			2SC4137(V,W)	TRANSISTOR		
Q17 ,18			2SD2340	TRANSISTOR		
Q19 ,20			2SB1531	TRANSISTOR		
Q21 ,22			2SC1845(F,E)	TRANSISTOR		
Q23			2SA1123(R,S)	TRANSISTOR		
Q24 ,25			2SC1845(F,E)	TRANSISTOR		
Q26			2SC2003(L,K)	TRANSISTOR		
Q29			2SC2878(B)	TRANSISTOR		
Q30			2SA1048(Y,GR)	TRANSISTOR		
Q30			2SA1175(F,E)	TRANSISTOR		
Q30			2SA1309A(Q,R)	TRANSISTOR		
Q30			2SA933S(Q,R)	TRANSISTOR		
Q35 ,36			2SC2878(B)	TRANSISTOR		
Q37			2SA1048(Y,GR)	TRANSISTOR		
Q37			2SA1175(F,E)	TRANSISTOR		
Q37			2SA1309A(Q,R)	TRANSISTOR		
Q37			2SA933S(Q,R)	TRANSISTOR		
Q38			2SC1740S(Q,R)	TRANSISTOR		
Q38			2SC2458(Y,GR)	TRANSISTOR		
Q38			2SC2785(F,E)	TRANSISTOR		
Q38			2SC3311A(Q,R)	TRANSISTOR		
Q40			DTC124ES	DIGITAL TRANSISTOR		
Q40			UN4212	TRANSISTOR		
Q52			2SC2003(L,K)	TRANSISTOR		
⚠ Q53			2SA954(L,K)	TRANSISTOR		
⚠ Q60			2SA1534A(R,S)	TRANSISTOR		
⚠ Q61			2SD2061(E,F,G)	TRANSISTOR		

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Q62			2SC2003(L,K)	TRANSISTOR				
Q63			2SA992(F,E)	TRANSISTOR				
DISPLAY UNIT (All destination) X14-362: JAPAN MADE X14-364: SINGAPORE, FRANCE MADE								
D201,202			B30-1291-05	LED				
C1 -4			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C5			CE04KW1C470M	ELECTRO	47UF	16WV		
C6 ,7			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C8			CE04KW1HR47M	ELECTRO	0.47UF	50WV		
C9			CC45FSL1H101J	CERAMIC	100PF	J		
C10			CE04KW1H2R2M	ELECTRO	2.2UF	50WV		
C11			CE04KW1H3R3M	ELECTRO	3.3UF	50WV		
C12			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C13			CQ92FM1H153J	MYLAR	0.015UF	J		
C14 ,15			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C16			CE04KW1V4R7M	ELECTRO	4.7UF	35WV		
C17			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C18			CE04KW1V100M	ELECTRO	10UF	35WV		
C19			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C20			CE04KW1V100M	ELECTRO	10UF	35WV		
C21			C90-3230-05	ELECTRO	100UF	16WV		
C27 ,28			CQ92FM1H153J	MYLAR	0.015UF	J		YMX
C27 ,28			CQ92FM1H223J	MYLAR	0.022UF	J		KP
C27 ,28			CQ92FM1H392J	MYLAR	3900PF	J		TE
C29 ,30			C90-3253-05	ELECTRO	1UF	50WV		
C41 ,42			CC45FCH1H220J	CERAMIC	22PF	J		
C43 -45			CK45FB1H471K	CERAMIC	470PF	K		
C46 ,47			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C48			CQ92FM1H273J	MYLAR	0.027UF	J		
C49			CE04KW1H010M	ELECTRO	1.0UF	50WV		
C50			CE04KW1C470M	ELECTRO	47UF	16WV		
C51			CE04KW1H010M	ELECTRO	1.0UF	50WV		
C52			CE04KW1A470M	ELECTRO	47UF	10WV		
C55			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C56			CC45FSL1H220J	CERAMIC	22PF	J		
C62 -64			C90-3253-05	ELECTRO	1UF	50WV		
C65			C90-3249-05	ELECTRO	0.22UF	50WV		
C66			C90-3244-05	ELECTRO	10UF	35WV		
C67 ,68			CC45FSL1H101J	CERAMIC	100PF	J		KPYMX
C67 ,68			CC45FSL1H271J	CERAMIC	270PF	J		TE
C69			CE04KW1V100M	ELECTRO	10UF	35WV		
C70			CC45FSL1H561J	CERAMIC	560PF	J		
C71			CQ92FM1H103J	MYLAR	0.010UF	J		
C106			CE04KW1C470M	ELECTRO	47UF	16WV		
C107			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C108			CK45FF1H223Z	CERAMIC	0.022UF	Z		TE
C109,110			C91-0085-05	CERAMIC	0.022UF	N		TE
C111-114			CK45FF1H223Z	CERAMIC	0.022UF	Z		TE
C135,136			CQ92FM1H682J	MYLAR	6800PF	J		YM
C170			CC45FSL1H101J	CERAMIC	100PF	J		TE
C171			CC45FSL1H470J	CERAMIC	47PF	J		TE
C201			CC45FCH1H330J	CERAMIC	33PF	J		
C202			CC45FCH1H270J	CERAMIC	27PF	J		
C203			CE04DW1A101M	ELECTRO	100UF	10WV		
C204,205			C91-0769-05	CERAMIC	0.01UF	K		

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C206			C90-3240-05	ELECTRO 2.2UF 35WV		
C209			C90-3253-05	ELECTRO 1UF 50WV		
C210-214			C91-0769-05	CERAMIC 0.01UF K		
C215			C90-3210-05	ELECTRO 22UF 6.3WV		
J1	1D,1H		E20-0321-05	LOCK TERMINAL BOARD(ANTENNA)	TE	
J1	1D,1H		E20-0476-05	LOCK TERMINAL BOARD(ANTENNA)	KPYMX	
J3	2A,2E		E11-0234-05	PHONE JACK(PHONES)		
CF1 ,2			L72-0531-05	CERAMIC FILTER	KPYMX	
CF1 ,2			L72-0536-05	CERAMIC FILTER	TE	
CF3			L72-0096-05	CERAMIC FILTER		
L1			L30-0488-05	AM IFT		
L2			L30-0439-25	FM IFT<DISCRIMINATOR>	KP	
L2			L30-0494-05	FM IFT<DISCRIMINATOR>	YMXTE	
L3			L40-1021-14	SMALL FIXED INDUCTOR(1.0mH,K)	TE	
L5			L79-0125-05	LC FILTER	TE	
L6 ,7			L79-0790-05	LC FILTER	TE	
L8			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		
L104			L39-0189-05	COMBINATION COIL	KPYMX	
L104			L39-0195-05	COMBINATION COIL	TE	
L105			L39-0192-05	COMBINATION COIL	TE	
L106			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		
X1			L77-1122-05	CRYSTAL RESONATOR(7.2MHz)		
X2			L78-0208-05	RESONATOR (456kHz)		
X201			L77-1176-05	CRYSTAL RESONATOR(4.194304MHz)		
CP201			R90-0855-05	MULTI-COMP 100KX5 J		
CP202			R90-0482-05	MULTI-COMP 100KX4 J 1/6W		
CP203			R90-0824-05	MULTI-COMP 4.7KX4		
R21			RD14NB2E680J	RD 68 J 1/4W		
R37			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
R53			RS14KB3D101J	FL-PROOF RS 100 J 2W		
R143			RS14KB3D121J	FL-PROOF RS 120 J 2W		
VR1			R12-3687-05	TRIMMING POT.(33K)<FM T-LEVEL>		
VR3			R12-3685-05	TRIMMING POT.(10K)<AM T-LEVEL>		
VR5			R12-6663-05	TRIMMING POT.(330K)<SEPA.>		
S1 -25	3B,3F		S40-1064-05	PUSH SWITCH(1-0,AI TIMER etc.)		
S27 ,28	3B,3F		S40-1064-05	PUSH SWITCH(TUNER,TAPE)		
S30 -36	3B,3F		S40-1064-05	PUSH SWITCH(LD/AUX,DISPLAY)		
△ S37	1D,1H		S31-3010-05	SLIDE SWITCH(110-120/220-240V)	YM	
S101	1D,1H		S31-2132-05	SLIDE SWITCH(DE-EM.,CH.SPACE)	YM	
D1			HSS104	DIODE	TE	
D1			1N4148	DIODE		
D1			1SS133	DIODE	TE	
D3			BZX55-C5V1	ZENER DIODE		F
D3			HZS5.1N(B2)	ZENER DIODE		
D3			RD5.1ES(B2)	ZENER DIODE		
D109,110			HSS104	DIODE	TE	
D109,110			1N4148	DIODE	TE	
D109,110			1SS133	DIODE	TE	
D111,112			HSS104	DIODE		
D111,112			1N4148	DIODE		
D111,112			1SS133	DIODE		
D113-116			HSS104	DIODE	TE	
D113-116			1N4148	DIODE	TE	
D113-116			1SS133	DIODE	TE	

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D120			BZX55-C3V3	ZENER DIODE		F
D120			HZS3.3N(B2)	ZENER DIODE		
D120			RD3.3ES(B2)	ZENER DIODE		
D122			HSS104	DIODE	TE	
D122			1N4148	DIODE	TE	
D122			1SS133	DIODE	TE	
D212			HSS104	DIODE		
D212			1N4148	DIODE		
D212			1SS133	DIODE		
D213			HSS104	DIODE	XTE	
D213			1N4148	DIODE	XTE	
D213			1SS133	DIODE	XTE	
D214			HSS104	DIODE	YMXTE	
D214			1N4148	DIODE	YMXTE	
D214			1SS133	DIODE	YMXTE	
D215			HSS104	DIODE	TE	
D215			1N4148	DIODE	TE	
D215			1SS133	DIODE	TE	
D216			HSS104	DIODE	YM	
D216			1SS133	DIODE	YM	
D217-227			HSS104	DIODE		
D217-227			1N4148	DIODE		
D217-227			1SS133	DIODE		
D231-234			HSS104	DIODE		
D231-234			1N4148	DIODE		
D231-234			1SS133	DIODE		
ED201	3B,3F		FIP11AM7R	INDICATOR TUBE		
IC1			LA1265	IC(FM/AM TUNER)		
IC2			LA3401	IC(FM MPX)		
IC3			LM7001	IC(PLL FREQUENCY SYNTHESIZER)		
IC201		*	CXP50116-397Q	IC(4BIT MICROPROCESSOR)		
IC201		*	CXP50116-397QA	IC(4BIT MICROPROCESSOR)		
IC202			CX-7991	IC(SERIAL/PARALLEL RONVERTER)		
Q1			2SC1923(R,O)	TRANSISTOR		
Q2			2SC1845(F,E)	TRANSISTOR		
Q3			JC501(P,Q)	TRANSISTOR		S
Q3			2SC1740S(Q,R)	TRANSISTOR		
Q3			2SC2458(Y,GR)	TRANSISTOR		
Q3			2SC2785(F,E)	TRANSISTOR		
Q3			2SC3311A(Q,R)	TRANSISTOR		
Q4			JC501(P,Q)	TRANSISTOR	TE	S
Q4			2SC1740S(Q,R)	TRANSISTOR	TE	
Q4			2SC2458(Y,GR)	TRANSISTOR	TE	
Q4			2SC2785(F,E)		TE	
Q4			2SC3311A(Q,R)	TRANSISTOR	TE	
Q5			2SK163(L,M)	FET	TE	
Q5			2SK364(GR,BL)	FET	TE	
Q7			JC501(P,Q)	TRANSISTOR		S
Q7			2SC1740S(Q,R)	TRANSISTOR		
Q7			2SC2458(Y,GR)	TRANSISTOR		
Q7			2SC2785(F,E)	TRANSISTOR		
Q7			2SC3311A(Q,R)	TRANSISTOR		
Q102			JA101(P,Q)	TRANSISTOR		S
Q102			2SA1048(Y,GR)	TRANSISTOR		
Q102			2SA1175(F,E)	TRANSISTOR		

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Q102			2SA1309A(Q,R)	TRANSISTOR		
Q102			2SA933S(Q,R)	TRANSISTOR		
Q103			JA101(P,Q)	TRANSISTOR	TE	S
Q103			2SA1048(Y,GR)	TRANSISTOR	TE	
Q103			2SA1175(F,E)	TRANSISTOR	TE	
Q103			2SA1309A(Q,R)	TRANSISTOR	TE	
Q103			2SA933S(Q,R)	TRANSISTOR	TE	
Q104			JA101(P,Q)	TRANSISTOR		S
Q104			2SA1048(Y,GR)	TRANSISTOR		
Q104			2SA1175(F,E)	TRANSISTOR		
Q104			2SA1309A(Q,R)	TRANSISTOR		
Q104			2SA933S(Q,R)	TRANSISTOR		
Q105,106			JC501(P,Q)	TRANSISTOR	TE	S
Q105,106			2SC1740S(Q,R)	TRANSISTOR	TE	
Q105,106			2SC2458(Y,GR)	TRANSISTOR	TE	
Q105,106			2SC2785(F,E)	TRANSISTOR	TE	
Q105,106			2SC3311A(Q,R)	TRANSISTOR	TE	
Q107,108			2SC2458(Y,GR)	TRANSISTOR	YM	
Q107,108			2SC3311A(Q,R)	TRANSISTOR	YM	
Q109,110			2SD1302(S,T)	TRANSISTOR		
Q111			JA101(P,Q)	TRANSISTOR		S
Q111			2SA1048(Y,GR)	TRANSISTOR		
Q111			2SA1175(F,E)	TRANSISTOR		
Q111			2SA1309A(Q,R)	TRANSISTOR		
Q111			2SA933S(Q,R)	TRANSISTOR		
Q201,202		*	2SC4038(Q,R)	TRANSISTOR		
Q203		*	2SA1561(Q,R)	TRANSISTOR	YM	
A1	3B,3F		W02-1046-05	ELECTRIC CIRCUIT MODULE		
DT1	2D,2H		W02-1041-15	FM FRONT-END ASSY	TE	
DT1	2D,2H		W02-1042-15	FM FRONT-END ASSY	KPYMX	

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SPECIFICATIONS

<K,P type>

Receiver unit (A-A5)

Amplifier section

Rated power output

28 watts per channel minimum RMS, both channels driven, at 8 Ω from 40 Hz to 20,000 Hz with no more than 0.09 % total harmonic distortion

Total harmonic distortion
.... 0.09 % (40 Hz ~ 20 kHz, 1/2 Rated power, 8 Ω)
..... 0.06 % (1 kHz, 1/2 Rated power, 8 Ω)
Signal to noise ratio
..... 95 dB(IHF'66) / 80 dB(IHF'78)
Input sensitivity / Impedance
LD / AUX IN ..... 150 mV / 47 kΩ
N.B. circuit (– 30 dB Volume level)(max.) ..... + 15 dB (at 60 Hz)
Output level / Impedance
SUPER WOOFER OUT ..... 1.5 V / 3.6 kΩ

FM Tuner section
Tuning frequency range ..... 87.5 MHz ~ 108 MHz
Sensitivity (MONO at 75 Ω) ..... 1.2 μV / 12.8 dBf
Total harmonic distortion (at 1 kHz)
MONO ..... 0.5 % (65 dBf input)
STEREO ..... 0.6 % (65 dBf input)
Signal to noise ratio (at 1 kHz)
MONO ..... 80 dB (85 dBf input)
STEREO ..... 74 dB (85 dBf input)
Selectivity (± 400 kHz) ..... 50 dB
Stereo separation (at 1 kHz) ..... 40 dB
Frequency response ..... 30 Hz ~ 15 kHz, + 0.5 dB, – 3 dB

AM Tuner section
Tuning frequency range
..... 530 kHz ~ 1,700 kHz
Usable sensitivity ..... 10 μV / (500 μV / m)
Signal to noise ratio
(at 30 % mod. 1 mV input) ..... 48 dB

[General]
Power consumption ..... 120 W
Dimensions ..... W: 270 mm (10-5 / 8")
H: 120 mm (4-3 / 4")
D: 332 mm (13-1 / 16")
Weight (Net) ..... 6.5 kg (14.3 lb)

SPECIFICATIONS

<T,E type>

Amplifier section

Rated power output
(IEC / NF) From 63 Hz to 12,500 Hz, 0.7 % T.H.D.
at 8 Ω ..... 30 W + 30 W
(DIN) 1 kHz at 8 Ω ..... 30 W + 30 W
Total harmonic distortion
.... 0.09 % (40 Hz ~ 20 kHz, 1/2 Rated power, 8 Ω)
..... 0.06 % (1 kHz, 1/2 Rated power, 8 Ω)
Signal to noise ratio
..... 95 dB(IHF'66) / 80 dB(IHF'78)
Input sensitivity / Impedance
LD / AUX IN ..... 150 mV / 47 kΩ
N.B. circuit (– 30 dB Volume level)(max.) ..... + 15 dB
(at 60 Hz)
Output level / Impedance
SUPER WOOFER OUT ..... 1.5 V / 3.6 kΩ

FM Tuner section

Tuning frequency range ..... 87.5 MHz ~ 108 MHz
Sensitivity (DIN at 75 Ω)
MONO ..... 0.7 μV
Total harmonic distortion (DIN at 1 kHz)
MONO ..... 0.6 % (65.2 dBf input)
STEREO ..... 0.8 % (65.2 dBf input)
Signal to noise ratio (DIN weighted at 1 kHz)
MONO ..... 70 dB (65.2 dBf input)
STEREO ..... 64 dB (65.2 dBf input)
Selectivity (DIN ± 300 kHz) ..... 60 dB
Stereo separation (DIN)
1 kHz ..... 40 dB
Frequency response ..... 30 Hz ~ 15 kHz, + 0.5 dB, – 3 dB

MW Tuner section

Tuning frequency range ..... 531 kHz ~ 1,602 kHz
Usable sensitivity ..... 10 μV / (500 μV / m)
Signal to noise ratio
(at 30 % mod. 1 mV input) ..... 48 dB

LW Tuner section

Tuning frequency range ..... 153 kHz ~ 281 kHz
Usable sensitivity ..... 22 μV
Signal to noise ratio
(at 30 % mod. 1 mV input) ..... 45 dB

[General]
Power consumption ..... 120 W
Dimensions ..... W: 270 mm (10-5 / 8")
H: 120 mm (4-3 / 4")
D: 332 mm (13-1 / 16")
Weight (Net) ..... 6.5 kg (14.3 lb)

A-A5/A5L

SPECIFICATIONS

<Y,M,X type>

Amplifier section

Rated power output
(EIAJ 8 Ω) ..... 35 W + 35 W
(IHF'66) From 40 Hz to 20 kHz, 0.09 % T.H.D.
at 8 Ω ..... 30 W + 30 W
(IEC / NF) From 63 Hz to 12,500 Hz, 0.7 % T.H.D.
at 8 Ω ..... 30 W + 30 W
Total harmonic distortion
.... 0.09 % (40 Hz ~ 20 kHz, 1/2 Rated power, 8 Ω)
..... 0.06 % (1 kHz, 1/2 Rated power, 8 Ω)
Signal to noise ratio
..... 95 dB(IHF'66) / 80 dB(IHF'78)
Input sensitivity / Impedance
LD / AUX IN ..... 150 mV / 47 kΩ
MIC ..... 1.2 mV / 47 kΩ
N.B. circuit (– 30 dB Volume level)(max.) ..... + 15 dB
(at 60 Hz)
Output level / Impedance
SUPER WOOFER OUT ..... 1.5 V / 3.6 kΩ

FM Tuner section

Tuning frequency range ..... 87.5 MHz ~ 108 MHz
Sensitivity (MONO at 75 Ω) ..... 1.2 μV / 12.8 dBf
Total harmonic distortion (at 1 kHz)
MONO ..... 0.5 % (65 dBf input)
STEREO ..... 0.6 % (65 dBf input)
Signal to noise ratio (at 1 kHz)
MONO ..... 80 dB (85 dBf input)
STEREO ..... 74 dB (85 dBf input)
Selectivity (± 400 kHz) ..... 50 dB
Stereo separation (at 1 kHz) ..... 40 dB
Frequency response ..... 30 Hz ~ 15 kHz, + 0.5 dB, – 3 dB

AM Tuner section

Tuning frequency range
9 kHz step ..... 531 kHz ~ 1,700 kHz
10 kHz step ..... 530 kHz ~ 1,610 kHz
Usable sensitivity ..... 10 μV / (500 μV / m)
Signal to noise ratio
(at 30 % mod. 1 mV input) ..... 48 dB

[General]
Power consumption ..... 120 W
Dimensions ..... W: 270 mm (10-5 / 8")
H: 120 mm (4-3 / 4")
D: 332 mm (13-1 / 16")
Weight (Net) ..... 6.5 kg (14.3 lb)

Note:
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

KENWOOD CORPORATION
Shonogi Shibuya Building, 17-5, 2-chome Shibuya, Shibuya-ku, Tokyo 150, Japan

KENWOOD U.S.A. CORPORATION
CONSUMER ELECTRONICS GROUP
P.O. BOX 22745, 2201 East Dominguez St., Long Beach, CA 90810 U.S.A.

KENWOOD ELECTRONICS CANADA INC.
6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8

KENWOOD ELECTRONICS LATIN AMERICA S.A.
P.O. BOX 55-2791, Paso 6 Plaza Chase, Cl. 47 y Aquilino de la Guardia, Panama, Republic de Panama

TRIO-KENWOOD U.K. LIMITED
KENWOOD House, Dwight Road, Watford, Herts, WD1 8EB United Kingdom

KENWOOD ELECTRONICS BENELUX N.V.
Mechelsesteenweg 418 B-1930 Zaventem, Belgium

KENWOOD ELECTRONICS DEUTSCHLAND GMBH
Rembrucker Str. 15, 6056 Heusenstamm, Germany

TRIO-KENWOOD FRANCE S.A.
13 Boulevard Ney, 75018 Paris, France

KENWOOD LINEAR S.p.A.
20125, Milano-Via Arbe, 50, Italy

KENWOOD ESPAÑA S.A.
Bolivia, 239-08020 Barcelona, Spain

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD. (A.C.N. 001 499 074)
P.O. BOX 504, 8 Figtree Drive, Australia Centre, Homebush, N.S.W. 2140, Australia

KENWOOD & LEE ELECTRONICS, LTD.
Unit 3712-3724, Level 37 Tower 1, Metroplaza, 223 Hing Fong Road, Kwai Fong N.T. Hong Kong

KENWOOD ELECTRONICS SINGAPORE PTE LTD
No. 1 Genting Lane # 07-00, Singapore, 1334